

Application: 21-06-021
(U 39 M)
Exhibit No.: (PG&E-6)
Date: February 28, 2022
Witness(es): Various

PACIFIC GAS AND ELECTRIC COMPANY

2023 GENERAL RATE CASE

EXHIBIT (PG&E-6)

CUSTOMER AND COMMUNICATIONS

CHAPTERS 1-9

**[INCLUDES ERRATA THROUGH
FEBRUARY 28, 2022]**

VOLUME 1 OF 2



PACIFIC GAS AND ELECTRIC COMPANY
2023 GENERAL RATE CASE
EXHIBIT (PG&E-6)
CUSTOMER AND COMMUNICATIONS

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2	CUSTOMER ENGAGEMENT [INCLUDES ERRATA THROUGH FEBRUARY 28, 2022]	Jason Guenther ¹
Attachment A	MEMORANDUM OF UNDERSTANDING BETWEEN SMALL BUSINESS UTILITY ADVOCATES AND PACIFIC GAS AND ELECTRIC COMPANY ON SMALL BUSINESS CUSTOMER ENGAGEMENT	Jason Guenther ¹
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¹ New witness as of the June 30, 2021 submission.

PACIFIC GAS AND ELECTRIC COMPANY
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PACIFIC GAS AND ELECTRIC COMPANY
CHAPTER 1
CUSTOMER AND COMMUNICATIONS SUMMARY
[INCLUDES NOVEMBER 5, 2021 ERRATA]

PACIFIC GAS AND ELECTRIC COMPANY
CHAPTER 1
CUSTOMER AND COMMUNICATIONS SUMMARY

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PACIFIC GAS AND ELECTRIC COMPANY
CHAPTER 1
CUSTOMER AND COMMUNICATIONS SUMMARY

A. Introduction

This chapter provides a summary of Pacific Gas and Electric Company's (PG&E or the Company) forecast of Customer and Communications expenditures and activities for the 2023 General Rate Case (GRC) period (2023-2026). Customer and Communications drives the Company's customer strategy and communications across all lines of business and delivers a broad range of services, products, and support to residential, small, and medium business, large commercial and industrial, and agricultural customers across PG&E's service area. The Customer and Communications organization is central to providing customers with a great customer experience and delivering hometown service.

B. Summary of Customer and Communications Exhibit

The Customer and Communications forecast for this GRC supports key activities, including:

- Executing PG&E's Regional Vice President (RVP) leadership structure, which allows the Company to fully integrate customer concerns and operational needs while ensuring the leaders are accountable to their customer delivery objectives.
- Implementing a replacement program for PG&E's Gas Advanced Metering Infrastructure (AMI) Modules to ensure PG&E continues to provide reliable, timely, and accurate billing to the Company's over 4 million gas customers.
- Investing in information technology initiatives such as PG&E's Billing System Upgrade and Web System Upgrade projects, which aim to improve the customer experience by enabling quicker implementation of new rate programs and enabling 24/7 access to personalized information that is optimized for accessibility and multi-language support, respectively.

- Providing customer outreach and education to increase awareness of PG&E's Public Safety Power Shutoff (PSPS) program and other safety-related initiatives.
- Designing and administering programs to support customer resiliency during PSPS events.
- Expanding PG&E's work in disadvantaged communities (DAC) and partnerships with community-based organizations.
- Supporting electric vehicles (EV) charging infrastructure operations and maintenance, and leading outreach to spur adoption of EVs.
- Ensuring PG&E's customers can access timely and relevant support from PG&E through its Customer and Community Services, Contact Centers, Customer Service Offices (CSO), and self-service channels.
- Protecting customer privacy in compliance with the California Consumer Privacy Act of 2018 and California Privacy Rights and Enforcement Act of 2020.

1. Forecast Summary

Customer and Communications' 2023 forecasts are \$373.6 million in expense and \$286.6 million in capital.

a. Expense

Table 1-1 shows Customer and Communications' 2020 recorded adjusted expenses and its 2021-2023 expense forecasts by chapter. Figure 1-1 shows the 2023 expense forecast by chapter, and Figure 1-2 shows the 2020-2023 incremental expense walk organized by the chapters in this exhibit.

TABLE 1-1
EXPENSES BY YEAR BY CHAPTER (2020-2023)
(THOUSANDS OF NOMINAL DOLLARS)

Line No.	Chapter	Description	2020 Recorded Adjusted	2021 Forecast	2022 Forecast	2023 Forecast
1	1A	Regional Vice Presidents ^(a)	–	\$2,015	\$4,171	\$6,064
2	2	Customer Engagement	\$78,701	113,901	91,530	101,830
3	3	Pricing Products and Income Qualified Programs	17,467	19,626	19,217	22,853
4	4	Contact Centers, Customer Technology and Digital Strategy	62,868	62,377	64,524	67,528
5	5	Customer Service Offices	13,515	17,371	17,969	17,991
6	6	Billing, Revenue and Credit	64,484	68,658	70,792	73,516
7	7	Metering Services and Engineering	9,016	7,928	6,404	8,024
8	8	Compliance and Regulatory Strategy	15,073	12,684	12,037	15,977
9	8	Customer Care OM	2,309	3,345	3,451	5,375
10	9	Gas AMI Module Replacement ^(b)	–	–	–	9,437
11	10	Customer Care Technology Projects ^(c)	20,362	16,071	18,808	21,446
12	11	Communications	29,188	30,025	29,573	23,578
13	–	Total Expenses	\$312,983	\$354,000	\$338,475	\$373,619

(a) Line 1, 2021 - 2023 Forecast values vary from the values listed in the Results of Operations (RO) Model due to errata. These amounts do not align to the RO Model provided to the Public Advocates Office at the time of filing. The RO will be updated to incorporate these errata with the Joint Comparison Exhibit submittal.

(b) Line 10, 2023 Forecast value varies from the value listed in the Results of Operations (RO) Model due to errata. This amount does not align to the RO Model provided to the Public Advocates Office at the time of filing. The RO will be updated to incorporate this errata with the Joint Comparison Exhibit submittal.

(c) Line 11, 2020 Record Adjusted and 2021-2023 Forecast values vary from the values listed in the Results of Operations (RO) Model due to errata. These amounts do not align to the RO Model provided to the Public Advocates Office at the time of filing. The RO will be updated to incorporate these errata with the Joint Comparison Exhibit submittal.

FIGURE 1-1
2023 EXPENSE FORECAST BY CHAPTER
(THOUSANDS OF NOMINAL DOLLARS)

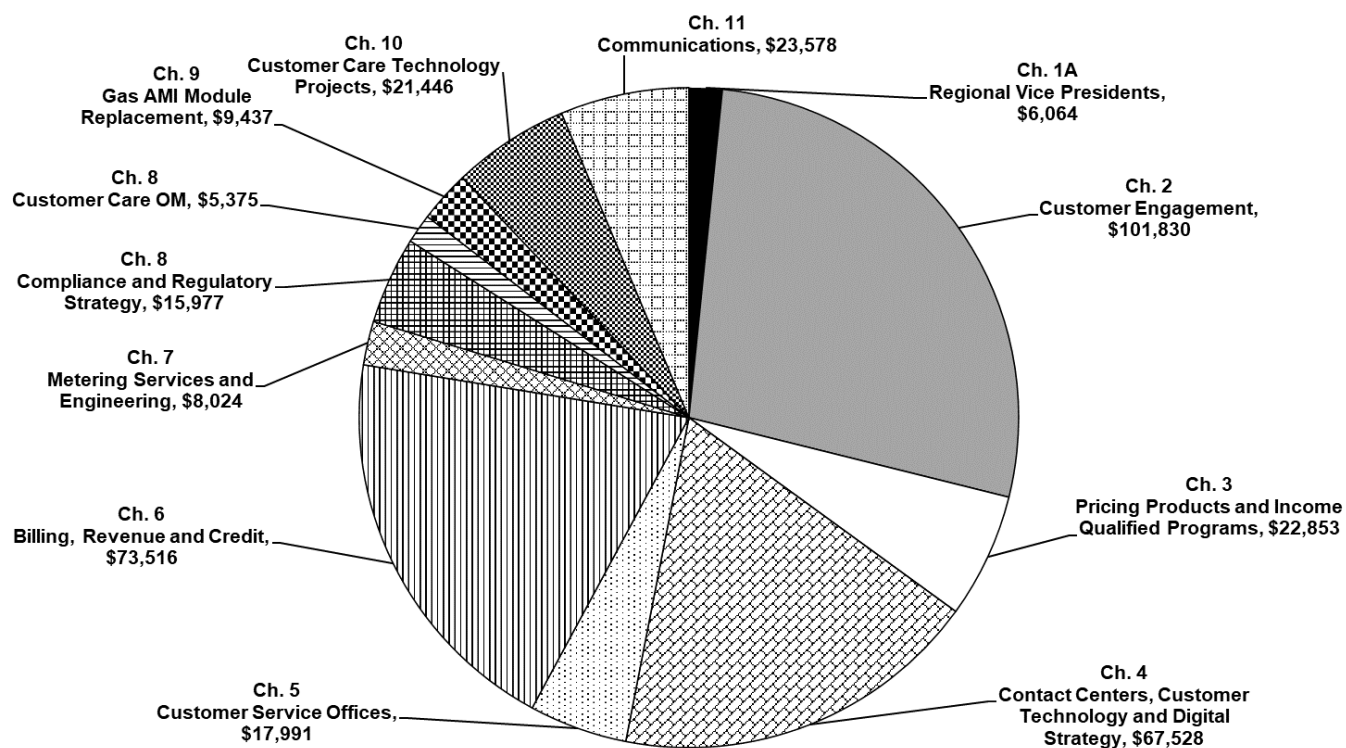


FIGURE 1-2
EXPENSE WALK (2020-2023)
(THOUSANDS OF NOMINAL DOLLARS)



b. Capital

Table 1-2 shows Customer and Communications' 2020 recorded adjusted capital expenditures and its 2023-2026 capital expenditures forecasts by chapter. Figure 1-2 shows the 2023 capital expenditures forecast by chapter, and Figure 1-3 shows the 2020-2023 incremental capital expenditures walk.

TABLE 1-2
CAPITAL EXPENDITURES BY YEAR BY CHAPTER (2020-2026)
(THOUSANDS OF NOMINAL DOLLARS)

Line No.	Chapter	Description	2020 Recorded Adjusted	2021 Forecast	2022 Forecast	2023 Forecast	2024 Forecast	2025 Forecast	2026 Forecast
1	2	Customer Engagement ^(a)	\$39,161	\$20,500	\$2,300	\$8,550	\$9,360	\$4,650	\$5,900
2	5	Customer Service Offices	24	100	100	100	100	100	100
3	6	Billing, Revenue and Credit	1,146	4,000	—	—	—	—	—
4	7	Metering Services and Engineering	116,298	111,702	108,515	107,329	111,440	116,028	118,935
5	9	Gas AMI Module Replacement ^(b)	—	46,063	54,751	94,988	141,626	133,560	110,310
6	10	Customer Care Technology Projects	14,968	35,680	77,700	75,600	58,500	27,000	27,000
7	—	Total Capital	\$171,597	\$218,045	\$243,366	\$286,567	\$321,026	\$281,338	\$262,245

(a) Line 1, 2020 Recorded Adjusted value varies from the value listed in the Results of Operations (RO) Model due to errata. This amount does not align to the RO Model provided to the Public Advocates Office at the time of filing. The RO will be updated to incorporate this errata with the Joint Comparison Exhibit submittal.

(b) Line 5, 2021-2026 Forecast values vary from the values listed in the Results of Operations (RO) Model due to errata. These amounts do not align to the RO Model provided to the Public Advocates Office at the time of filing. The RO will be updated to incorporate these errata with the Joint Comparison Exhibit submittal.

FIGURE 1-3
2023 CAPITAL EXPENDITURES FORECAST BY CHAPTER
(THOUSANDS OF NOMINAL DOLLARS)

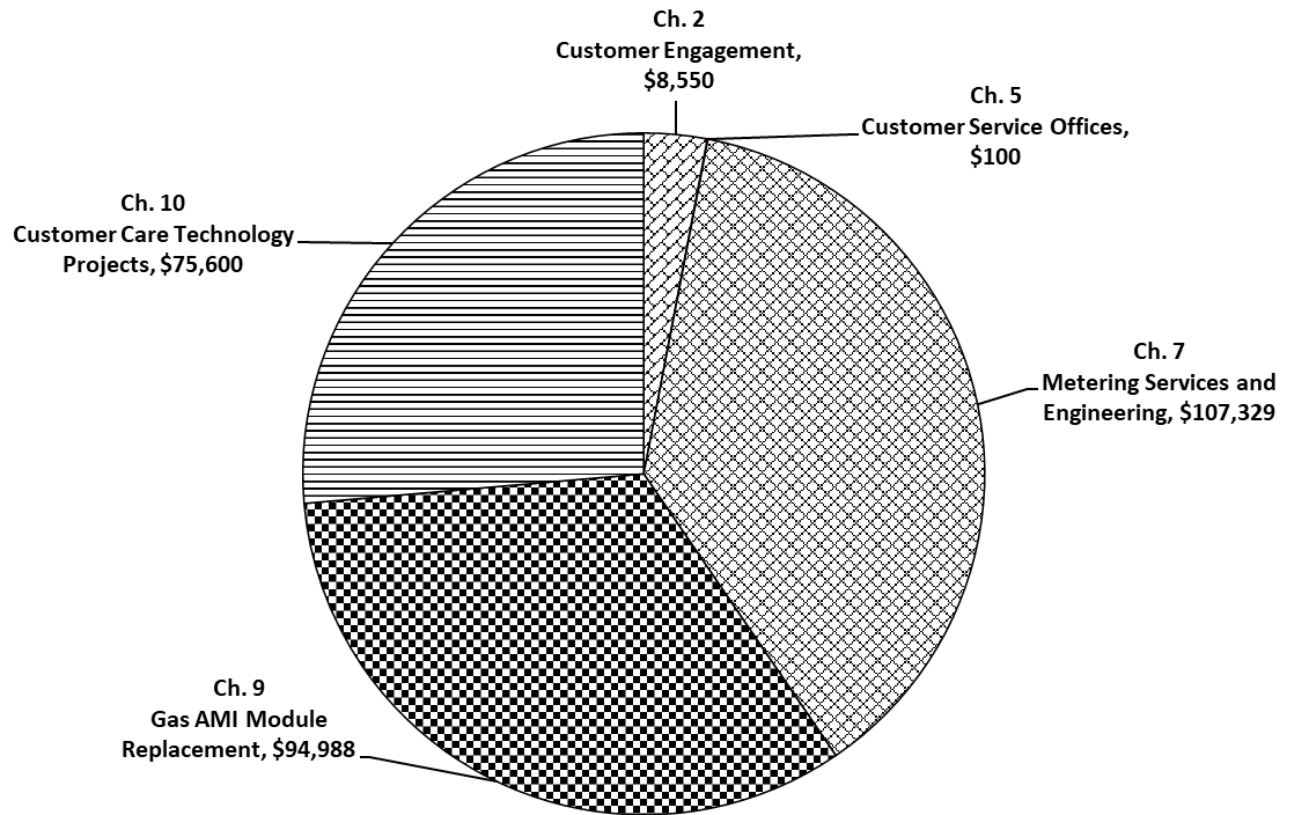
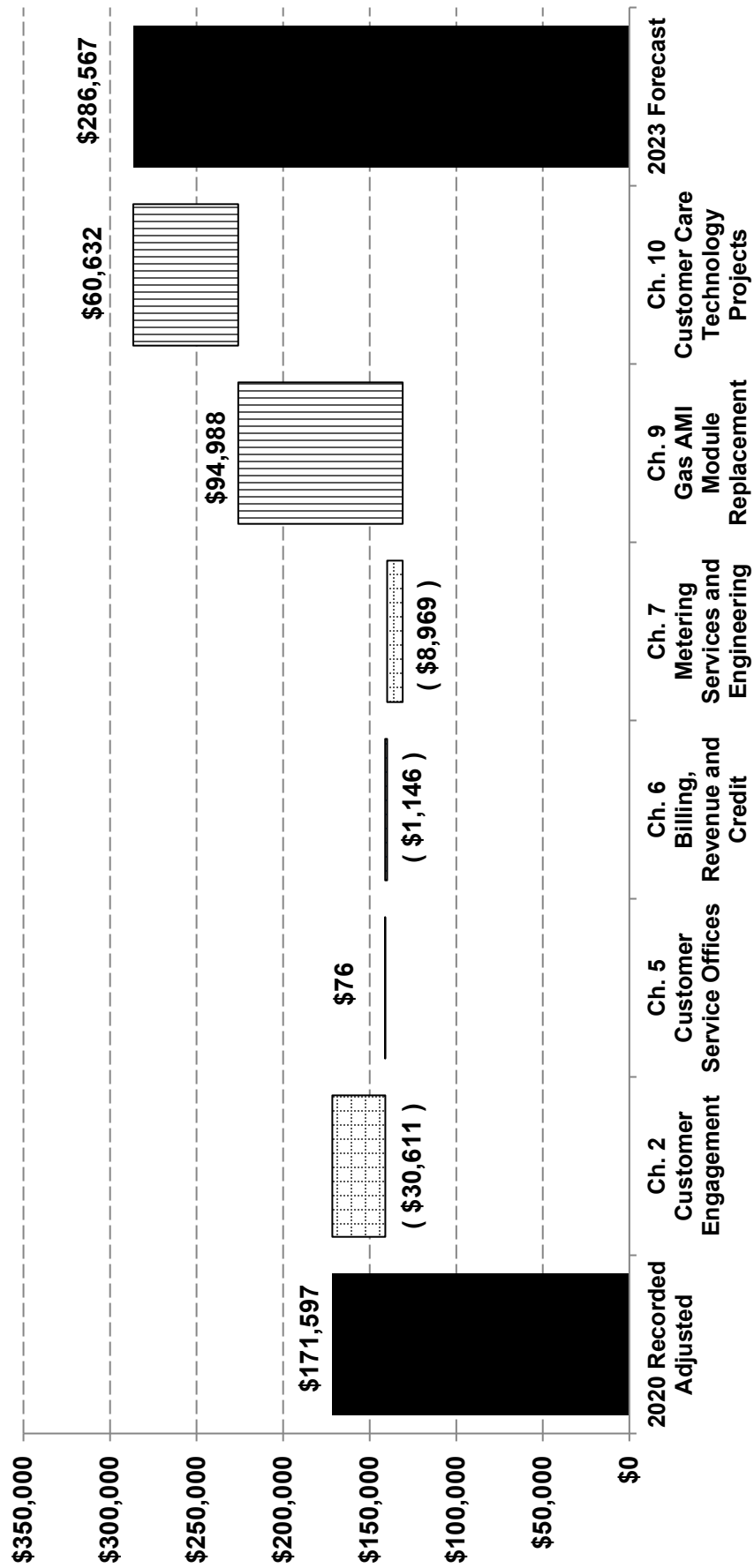


FIGURE 1-4
CAPITAL EXPENDITURES WALK (2020-2023)
(THOUSANDS OF NOMINAL DOLLARS)



2. Customer and Communications Exhibit Roadmap

a. Chapter 1A: Regional Vice Presidents

This chapter presents PG&E's expense forecast for its five new RVPs and their teams. PG&E announced its five new RVPs on May 27, 2021, meeting its requirement to hire by June 1, 2021 pursuant to Decision (D.) 20-05-053.¹

b. Chapter 2: Customer Engagement

This chapter presents PG&E's Customer Engagement expense and capital forecast, which supports the following six program areas: Customer and Community Services, PSPS Planning and Preparedness, Economic Development, Non-Tariffed Products and Services, Distributed Generation and Customer Data Tools, and Clean Energy Transportation. The chapter also presents two Memorandums of Understanding with Small Business Utility Advocates² and Center for Accessible Technology³ regarding service and support to PG&E's small business customers, and improving customer accessibility during the 2023 GRC period, respectively. Further, this chapter requests the closure of the California Distributed Generation Statistics Website Memorandum Account and cost recovery once the recorded balance as of December 31, 2022 is recovered.⁴

c. Chapter 3: Pricing Products and Income Qualified Programs

This chapter presents PG&E's expense forecast for Pricing Products activities that primarily support rate programs and rate structure changes. The chapter also requests funds for Income Qualified Programs initiatives that are not funded by Public Purpose Program funds or greenhouse gas revenues, including Natural Gas Appliance Testing, DAC and community-based organization engagement activities, maintenance of the Low Income Home Energy Assistance Program

¹ D.20-05-053, pp. 52, 104.

² See Exhibit (PG&E-6), Ch. 2, Attachment A.

³ See Exhibit (PG&E-6), Ch. 2, Attachment B.

⁴ See Exhibit (PG&E-6), Ch. 2, Attachment C.

Portal, and Cooling Centers. Further, this chapter presents a Memorandum of Understanding with National Diversity Coalition regarding the delivery of programs and supporting the needs of underserved communities including communities of color.⁵

d. Chapter 4: Contact Centers, Customer Technology and Digital Strategy

This chapter presents PG&E's expense forecast for management and operation of PG&E's Contact Centers, Customer Care Technology, and Digital Strategy teams. This includes costs for PG&E's three contact centers, customer notifications, and digital and mobile channels. This chapter also describes PG&E's proposed cost allocation method of customer care expenses, as required in D.20-12-005. PG&E has complied with the requirements as set forth in D. 20-12-005 Ordering Paragraph 18.b. to track and report data on its Customer Care services and programs to support the proposed cost allocation method of Customer Care expenses. See Exhibit 6, Chapter 4, Section E for PG&E's detailed cost allocation method and supporting data.⁶

e. Chapter 5: Customer Service Offices

This chapter presents PG&E's expense and capital forecasts for its CSOs organization, which operates 65 CSOs⁷ in communities throughout PG&E's service territory that are operated and staffed by employees who primarily take payments from customers.⁸ In addition, the CSO organization manages over 600 Neighborhood Payment Centers that are owned and operated by third-parties and authorized to collect and process in-person payments.

⁵ See Exhibit (PG&E-6), Ch. 3, Attachment A.

⁶ See Exhibit (PG&E-6), WP 4-18, lines 1-38 for PG&E's proposed cost allocation by Major Work Category.

⁷ Exhibit (PG&E-6), WP 5-10 for a list of the CSOs.

⁸ All CSOs have been temporarily closed since mid-March 2020 due to coronavirus restrictions.

f. Chapter 6: Billing, Revenue and Credit

This chapter presents PG&E's expense and capital forecasts for Billing, Revenue and Credit, which is responsible for issuing customer bills and notices, processing payments, and billing exceptions, conducting credit and collection activities, and reporting revenue.

g. Chapter 7: Metering Services and Engineering

This chapter presents PG&E's expense and capital forecasts for its Metering Services and Engineering programs. The chapter also presents PG&E's SmartMeter™ Cost Effectiveness Update in compliance with D.19-10-038, Ordering Paragraph (OP) 1.⁹

h. Chapter 8: Compliance and Regulatory Strategy

This chapter presents PG&E's expense forecast for the Compliance & Regulatory Strategy¹⁰ organization. This chapter also requests approval of PG&E's OM expense forecast for the entire Customer Care line of business. Further, the chapter presents the results of an independent audit of PG&E's data privacy and security practices in compliance with D.11-07-056.¹¹

i. Chapter 9: Gas Advanced Metering Infrastructure Module Replacement

This chapter presents PG&E's expense and capitals forecasts for its Gas AMI Module Replacement project, which is necessary to provide reliable, timely and accurate billing to the Company's gas customers.

j. Chapter 10: Customer Care Technology Projects

This chapter presents PG&E's expense and capital forecasts for technology projects that support PG&E's Customer Care line of business. These projects enable multi-channel customer support, self-service tools for information and data privacy, and new rate and billing programs.

⁹ See Exhibit (PG&E-6), Ch. 7, Attachment A.

¹⁰ Formerly known as the Customer Care Regulatory Policy and Compliance organization in PG&E's 2020 GRC.

¹¹ See Exhibit (PG&E-6), Ch. 8, Attachment A.

1 k. **Chapter 11: Communications**

2 This chapter presents PG&E's expense forecast for the
3 Communications Department, whose primary role is to communicate
4 with customers, employees, media, and the public. ~~The chapter also~~
5 ~~requests approval to recover the costs for wildfire communications~~
6 ~~incurred in 2020 and recorded in the Wildfire Mitigation Plan~~
7 ~~Memorandum Account.~~¹²

8 **3. Customer and Communications Management Structure**

9 In March 2020, Customer Care restructured its organization to align
10 resources to meet the needs of customers and drive a more
11 customer-centric culture that is focused on providing safe, reliable, clean
12 and affordable electric and gas services. With the change, Customer Care
13 updated its management structure, which includes the following roles,
14 departments, and activities.

- 15 • **VP, Customer Operations and Enablement**, responsible for
16 developing and leading a customer centric operations organization that
17 delivers meter testing, customer billing, payment processing, credit and
18 collection policy, pricing strategy and implementation and operations.
- 19 • **VP, Residential Services and Digital Channels**, responsible for
20 developing and leading channel strategy to provide customer service for
21 PG&E's residential customers that includes contact centers, CSOs, and
22 digital and technology strategy.
- 23 • **VP Business Development and Customer Engagement**, responsible
24 for developing and leading division leadership teams, customer
25 relationship managers, new revenue development, third party supplier
26 relationships (e.g., Community Choice Aggregators), and economic
27 development. In addition, this role is responsible for the strategy,
28 design, implementation, and effectiveness of PG&E's portfolio of
29 customer programs, such as distributed generation and clean energy
30 transportation.
- 31 • **Senior Director Customer Experience and Regulatory Strategy**,
32 responsible for research in support of the development of strategies to

12 See Exhibit (PG&E-6), Ch. 11, Attachment A.

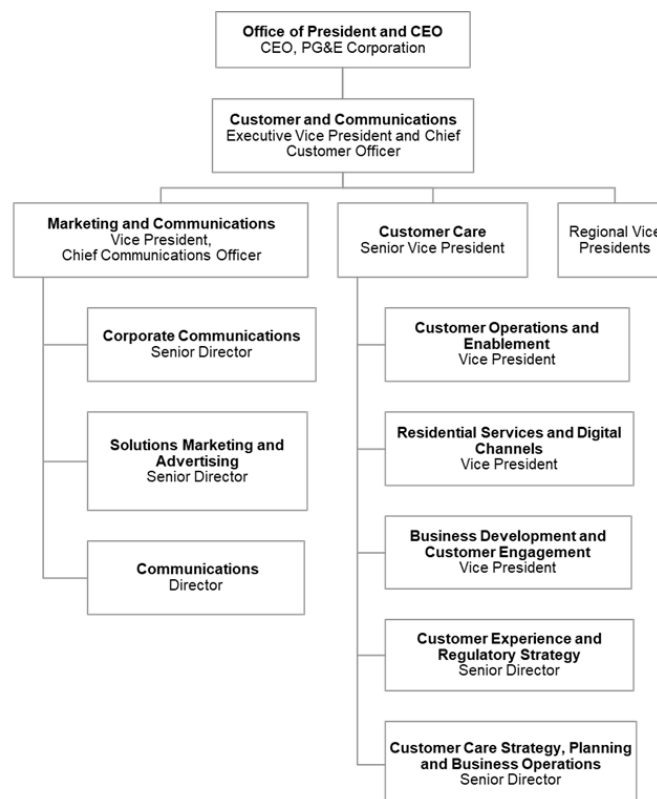
improve the customer experience and for strategic coordination and oversight of Customer Care regulatory proceedings.

- **Senior Director Customer Care Strategy, Planning and Business Operations**, is responsible for overall Customer Care strategy, governance and compliance.

Additionally, in January 2021, PG&E introduced a new organizational structure that included the addition of an Executive Vice President and Chief Customer Officer, who oversees the Customer Care and Communications organizations, as well as the new RVPs and their teams. These organizational changes are designed to improve PG&E's delivery of safe, reliable, and affordable service to its customers. As part of this organizational update, the Communications department moved from Corporate Affairs to the Customer and Communications organization.

PG&E's Customer and Communications organizational structure is shown in Figure 1-5.

**FIGURE 1-5
CUSTOMER AND COMMUNICATIONS**



1 **C. Compliance with Prior Commission Decisions**

2 Table 1-3 presents the compliance requirements from prior decisions issued
 3 by the Commission and identifies the chapters in this exhibit where PG&E's
 4 actions to comply with each requirement are described. Non-recurring prior
 5 compliance items and those that were completed prior to the filing of this GRC
 6 are not included in Table 1-3.

**TABLE 1-3
OVERVIEW OF COMPLIANCE ITEMS**

Line No.	CPUC Decision	Topic	Reference
1	D.20-12-005, OP 1	Memorandum of Understanding with Small Business Utility Advocates	Exhibit (PG&E-6), Chapter 2.
2	D.20-12-005, OP 1	Stipulation with National Diversity Coalition	Exhibit (PG&E-6), Chapter 2. Exhibit (PG&E-6), Chapter 3.
3	D.17-12-009, OP 114	Cooling Centers	Exhibit (PG&E-6), Chapter 3.
4	D.20-12-005, OP 18b	Cost Allocation	Exhibit (PG&E-6), Chapter 4.
5	D.07-09-041, OP 11	Uncollectibles Due to Rule 17.1 Time Limits	Exhibit (PG&E-6), Chapter 6.
6	D.20-12-005, OP 16	Residential Disconnections	Exhibit (PG&E-6), Chapter 6.
7	D.14-12-078, OP 5 and 6	SmartMeter Opt-Out	Exhibit (PG&E-6), Chapter 7.
8	D.19-10-038, OP 1	SmartMeter Cost Effectiveness Update	Exhibit (PG&E-6), Chapter 7A.
9	D.11-07-056, Atch. D, Sec. 9(d)	Data Privacy	Exhibit (PG&E-6), Chapter 8, Atch 8A.
10	D.20-12-005, OP 1	Deferred Work Showing	Exhibit (PG&E-6), Chapter 8.

PACIFIC GAS AND ELECTRIC COMPANY 2023 GENERAL RATE CASE

Testimony X Workpapers SOQ

Exhibit Number: PG&E-6 Chapter Number: 1

Chapter Title: Customer and Communications Summary

Witness Name: Meghan Dewey

Page No.	Line No.	Item	As Filed	As Corrected
Errata as of November 5, 2021				
1-i	Lines 6-19	Table Of Contents Pagination	1-1 to 1-6	1-10 to 1-15
NA	NA	Footer Pagination	1-1 to 1-9 and 1-1 to 1-6	1-1 to 1-15
1-3	Line 11	Table 1-1 2020 Recorded Adjusted	20,427	20,362
1-3	Line 13	Table 1-1 Total Expenses 2020 Recorded Adjusted	\$313,049	\$312,983
1-5	NA	Figure 1-2 2020 Recorded Adjusted	\$313,049	\$313,000
1-5	NA	Figure 1-2 Ch. 10 Customer Care Technology Projects	\$1,019	\$1,067

Page No.	Line No.	Item	As Filed	As Corrected
1-10	Lines 17-20	Wording	Further, this chapter requests the closure of the California Distributed Generation Statistics Website Memorandum Account and cost recovery of the recorded balance as of December 31, 2022. ⁴	Further, this chapter requests the closure of the California Distributed Generation Statistics Website Memorandum Account and cost recovery once the recorded balance as of December 31, 2022 is recovered. ⁴

PACIFIC GAS AND ELECTRIC COMPANY
CHAPTER 1A
REGIONAL VICE PRESIDENTS

PACIFIC GAS AND ELECTRIC COMPANY
CHAPTER 1A
REGIONAL VICE PRESIDENTS

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PACIFIC GAS AND ELECTRIC COMPANY
CHAPTER 1A
REGIONAL VICE PRESIDENTS

A. Introduction

1. Scope and Purpose

This chapter demonstrates that Pacific Gas and Electric Company's (PG&E or the Company) expense forecast for its five new Regional Vice Presidents (VP) and their teams is reasonable and should be approved.

PG&E proposed developing "a regional restructuring plan that would result in local operating regions led by an officer of the utility"¹ in the Plan of Reorganization (POR) Order Instituting Investigation. The California Public Utilities Commission (CPUC or Commission) agreed, finding that: "Regional restructuring of PG&E has the potential to improve safety and responsiveness to local communities,"² and ordered PG&E to file an application to detail its regional restructuring proposal.³ PG&E submitted its Application and Regionalization Proposal on June 30, 2020 (Application (A.) 20-06-011) and an Updated Regionalization Proposal on February 26, 2021. PG&E proposed five new regions and explained its process to hire five new Regional VPs to comply with a separate requirement in the POR Decision.⁴ The Commission ordered PG&E to take affirmative steps towards regionalization before a Commission decision is issued, including retaining the five Regional VPs and five Regional Safety Directors by June 1, 2021.⁵ PG&E's forecast for the Regional VPs is presented in this chapter. PG&E's forecast for the Regional Safety Directors is presented in Exhibit 7, Chapter 1.

The Regional VPs will lead the regional teams by facilitating cross-functional collaboration and functional and regional alignment around

¹ D.20-05-053, p. 45.

² D.20-05-053, p. 109, Findings of Fact 12.

³ D.20-05-053, p. 111, Ordering Paragraph 3.

⁴ A.20-06-011, PG&E's Updated Regionalization Proposal (February 26, 2021), p. 6.

⁵ D.20-05-053, p. 52.

1 a shared purpose of providing service to customers and communities. This
2 model will facilitate the tactical resolution of problems by local operations
3 teams. It will also address more strategic local challenges that require
4 additional influence and resources to affect broader change, such as
5 challenges that span multiple functions or a large geographic footprint.

6 **2. Summary of Request**

7 PG&E requests that the CPUC adopt its 2023 expense forecast of
8 \$6.1 million⁶ for the Regional VPs and their teams. There is no recorded
9 expense for 2020 as PG&E will begin incurring costs in 2021 to hire these
10 leaders and stand up their teams. In addition, there are no capital
11 expenditures forecasted for the period 2021-2026.

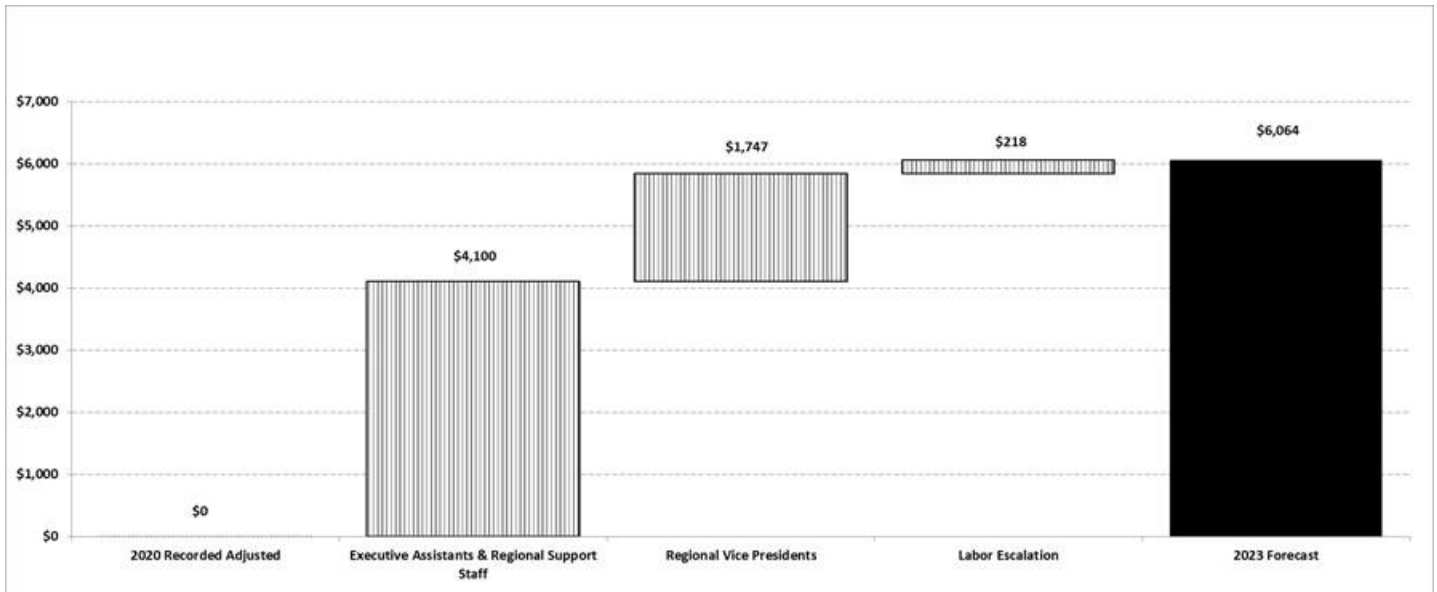
12 **3. Overview of Recorded and Forecast Costs**

13 **a. Expense**

14 Figure 1A-1 below shows the change from the 2020 recorded
15 adjusted expense to the 2023 forecast. The activities that form the
16 basis for the expense forecast are described in Section B.2. below. The
17 forecast drivers are discussed in Section C.2. below.

6 This value varies from the value listed in the Results of Operations (RO) Model due to errata. This amount does not align to the RO Model provided to the Public Advocates Office at the time of filing. The RO will be updated to incorporate this errata with the Joint Comparison Exhibit submittal.

**FIGURE 1A-1
EXPENSE WALK (2020-2023)
(THOUSANDS OF NOMINAL DOLLARS)**



4. Support for Request

PG&E's expense forecasts for the Regional VPs and their teams are reasonable for the following reasons:

- Provides funding for five Regional VPs who will improve PG&E's responsiveness to local customer and community issues by being based in their region, and possessing greater authority to resolve issues along with the ability to escalate major issues directly to the Executive Vice President (EVP) and Chief Customer Officer (CCO); and
- Provides funding for two Executive Assistants and 20 principal level Regional Support Staff who will support the Regional VPs by providing logistical support to enable cross-functional collaboration with regional leadership and representatives from other functional groups (e.g., gas and electric operations, engineering, and public affairs teams) to quickly identify and resolve local issues.

5. Organization of the Remainder of This Chapter

The remainder of the chapter is organized as follows:

- Section B – Program Overview
- Section C – Activities, Costs, and Forecast Drivers by Major Work Category (MWC)

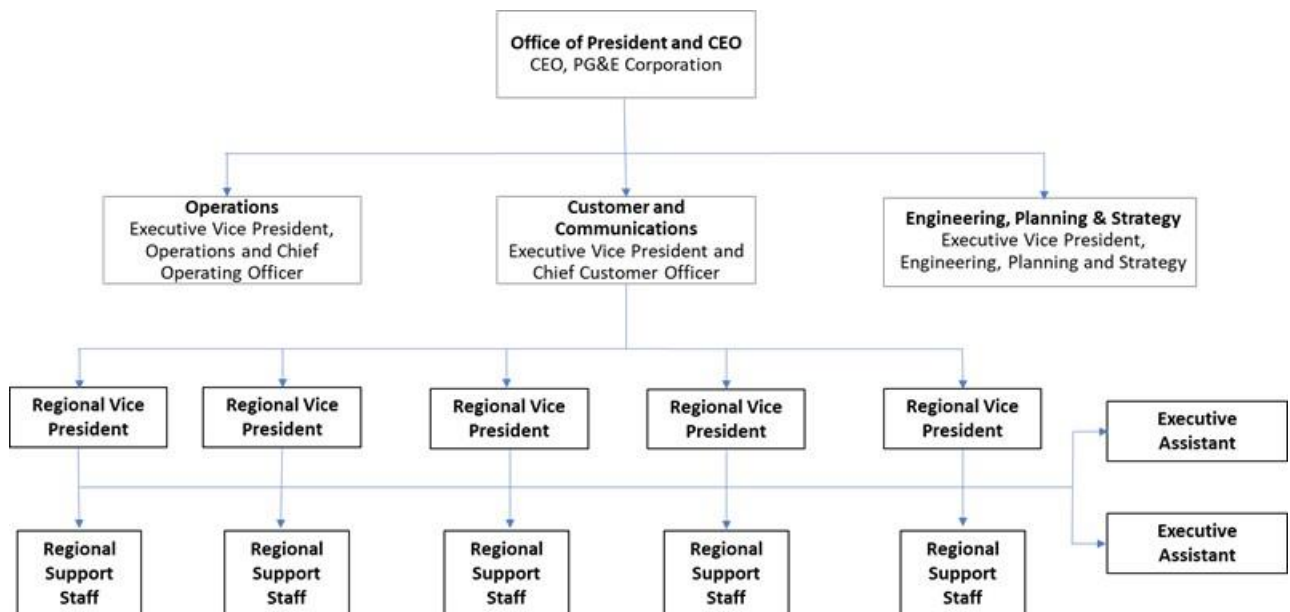
- Section D – Estimating Method
- Section E – Compliance with Prior Commission Decisions
- Section F – Cost Table

B. Program Overview

1. Management Structure

The POR Decision requires the Regional VPs to report to the Chief Executive Officer and President.⁷ Since the role and function of PG&E's Utility President has been replaced by three executive officers, PG&E proposed in the application proceeding that the Regional VPs will report directly to the EVP and CCO. This reporting relationship will center the entire Company on the customer by elevating the role of EVP and CCO to ensure that the needs of the customer are understood and addressed. This organizational structure is shown in Figure 1A-2 below.

**FIGURE 1A-2
REGIONAL VICE PRESIDENTS ORGANIZATIONAL STRUCTURE**



⁷ D.20-05-053, p. 52.

2. Program Description

The Commission's POR Decision requires PG&E to engage its Regional VPs by June 1, 2021, one year from the date of the decision.⁸ The Regional VPs will be embedded in the regions⁹ for which they are responsible and will share direct accountability for their region's customer experience, safety, and operational performance with the Company's core functional organizations. These Regional VPs will develop a deep knowledge of the priorities within their region and lead cross-functional efforts to improve performance. For example, the Regional VPs will lead daily huddles with regional leadership and representatives from other functional groups (e.g., gas and electric operations, engineering, and public affairs teams) to quickly identify and resolve local issues.

Each Regional VP will manage a team of principal level Regional Support Staff who will provide logistical support to enable cross-functional collaboration. For example, the Regional Support Staff will assist in planning Operating Reviews¹⁰ with local functional leaders, as well as with other functional representatives when necessary. In addition, this role will coordinate with functional analytics teams to assist in preparing the dashboards and scorecards utilized by regional leaders. The Regional Support Staff will build strong relationships with internal, locally based functional leads who are connected to the community, such as Local Public Affairs, to remain aware of community concerns and support the Regional VPs in community engagement. They will assist the Regional VPs in problem solving efforts, such as preparing research, analysis, or community perspectives on complex issues.

In summary, the Regional VPs and their teams will be well-positioned to identify, prioritize, and address local concerns by collaborating internally with a peer team of local safety, operations, planning, engineering, and customer

⁸ D.20-05-053, p. 52.

⁹ The five regions include North Coast, North Valley and Sierra, Bay Area, South Bay and Central Coast, and Central Valley; see A.20-06-011, PG&E's Updated Regionalization Proposal (February 26, 2021), Attachment A, p. 32.

¹⁰ The Regional VPs will lead daily huddles with regional leadership and representatives from functional groups to maintain consistent dialogue about performance, and to quickly identify and resolve local issues.

leaders, and, externally through direct engagement with key customers, business organizations, local governments, and other community groups, as appropriate, when challenging issues arise.

C. Activities, Costs, and Forecast Drivers by MWC

1. MWC OM – Operational Management (OM)

a. Costs

MWC OM includes labor and employee-related costs to provide supervision and management support. The costs for the Regional VPs, Executive Assistants, and Regional Support Staff will be recorded in MWC OM.¹¹

2. Forecast Driver – Labor

- a) Regional VPs: There will be five new officer positions. These positions will be shareholder funded through 2022 but included in MWC OM beginning 2023.¹²
- b) Executive Assistants: There will be two positions to support the five Regional VPs. The 2021 forecast includes costs for six months based on a start date of July 1, 2021, while the 2022 and 2023 forecasts include annual costs.¹³
- c. Regional Support Staff: There will be 20 principal level positions supporting the five Regional VPs. The 2021 forecast includes costs for six months based on a start date of July 1, 2021, while the 2022 and 2023 forecasts include annual costs.¹⁴

D. Estimating Method

This chapter's 2023 expense forecast was developed based on the following assumptions and methodology:

¹¹ The MWC OM forecast in this chapter is separate from the MWC OM forecast presented in Exhibit (PG&E-6), Customer and Communications, Ch. 8, Compliance and Regulatory Strategy.

¹² Exhibit (PG&E-6), WP 1A-3, line 10.

¹³ Exhibit (PG&E-6), WP 1A-3, lines 2 and 6.

¹⁴ *Ibid.*

- 1) 2021 Forecast: Six month (assumes start date of July 1, 2021) total labor costs for two Executive Assistants and 20 Regional Support Staff based on each position's cost in 2020 base year dollars;¹⁵
- 2) 2022 Forecast: Annual labor costs for two Executive Assistants and 20 Regional Support Staff plus labor escalation consistent with the escalation rates described in Exhibit (PG&E-8), Chapter 4;¹⁶ and
- 3) 2023 Forecast: Annual labor costs for five Regional VPs, two Executive Assistants and 20 Regional Support Staff plus labor escalation consistent with the escalation rates described in Exhibit (PG&E-8), Chapter 4.¹⁷

E. Compliance with Prior Commission Decisions

1. Regional VPs

The Commission's POR Decision requires PG&E to engage its Regional VPs by June 1, 2021, one year from the date of the decision.¹⁸ PG&E announced the appointment of the Regional VPs on May 27, 2021.

F. Cost Table

Table 1A-1 shows 2016 through 2020 recorded adjusted expenses and 2021 through 2023 forecast expenses by MWC.

¹⁵ Exhibit (PG&E-6), WP 1A-3, line 2.

¹⁶ Exhibit (PG&E-6), WP 1A-3, lines 5-6.

¹⁷ Exhibit (PG&E-6), WP 1A-3, lines 9-10.

¹⁸ D.20-05-053, p. 52.

TABLE 1A-1
EXPENSES BY MWC
(THOUSANDS OF NOMINAL DOLLARS)

Line No.	MWC	Description	2016 Recorded Adjusted	2017 Recorded Adjusted	2018 Recorded Adjusted	2019 Recorded Adjusted	2020 Recorded Adjusted	2021 Forecast	2022 Forecast	2023 Forecast	Reference (A)
1	OM	Operational Management	-	-	-	-	-	\$2,015	\$4,171	\$6,064	WP 1A-3: Lines 4, 8 and 12
2	Total		-	-	-	-	-	\$2,015	\$4,171	\$6,064	

Notes:

Line 2, 2021 - 2023 Total Forecast values vary from the values listed in the Results of Operations (RO) Model due to errata.
These amounts do not align to the RO Model provided to the Public Advocates Office at the time of filing. The RO will be updated to incorporate these errata with the Joint Comparison Exhibit submittal.

PACIFIC GAS AND ELECTRIC COMPANY
CHAPTER 2
CUSTOMER ENGAGEMENT
[INCLUDES ERRATA THROUGH
FEBRUARY 28, 2022]

PACIFIC GAS AND ELECTRIC COMPANY
CHAPTER 2
CUSTOMER ENGAGEMENT

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PACIFIC GAS AND ELECTRIC COMPANY

CHAPTER 2

CUSTOMER ENGAGEMENT

A. Introduction

1. Scope and Purpose

This chapter demonstrates that Pacific Gas and Electric Company's (PG&E or the Company) expense and capital forecast for Customer Engagement (CE) is reasonable and should be approved by the California Public Utilities Commission (CPUC or Commission).

CE provides essential services and benefits to PG&E's customers through direct customer service and customer programs. Specifically, CE's 2023 expense and capital forecasts support the following six program areas: Customer and Community Services, Public Safety Power Shutoff (PSPS) Planning and Readiness, Economic Development (ED), Non-Tariffed Products and Services, Distributed Generation (DG) and Customer Data Tools, and Clean Energy Transportation.¹

The CE expense forecast includes PSPS Planning and Readiness costs that were previously recorded outside of the General Rate Case (GRC) through PG&E's Wildfire Mitigation Balancing Account (WMBA) and the Fire Risk Mitigation Memorandum Account (FRMMA). Beginning in 2023, PG&E proposes to recover the forecasted costs through GRC revenues. The 2023 test year expense forecast is \$24.4 million.²

In addition, the forecast includes ongoing operation and maintenance costs for PG&E's Transportation Electrification (TE) programs including Electric Vehicle (EV) Charge Network, FleetReady, Direct Current Fast Charger Make-Ready (Fast Charge), EV Charge Schools, and EV Charge Parks, which were previously recovered through PG&E's Transportation Electrification Balancing Account (TEBA).³ Beginning in 2023, PG&E

¹ See Exhibit (PG&E-6), WP 2-28 for an overview of CE programs and organizational departments represented in MWC functions.

² Exhibit (PG&E-6), WP 2-32, line 16.

³ D.18-05-040 and D.19-11-017 authorized PG&E to continue recording costs associated with Transportation Electrification Projects in the TEBA until its 2023 GRC.

proposes to recover forecasted costs for these activities through GRC revenues.⁴ The 2023 expense forecast is \$3.5 million for these TE activities.⁵ The 2021-2026 capital forecasts for these TE activities are shown in the table below.

TABLE 2-1
2021-2026 TRANSPORTATION ELECTRIFICATION CAPITAL FORECASTS

Line No.	Year	Capital Forecasts
1	2021	\$2.4 million ^(a)
2	2022	\$2.3 million ^(b)
3	2023	\$8.6 million ^(c)
4	2024	\$9.4 million ^(d)
5	2025	\$4.7 million ^(e)
6	2026	\$5.9 million ^(f)

(a) Exhibit (PG&E-6), WP 2-45, line 1.

(b) Exhibit (PG&E-6), WP 2-45, line 1.

(c) Exhibit (PG&E-6), WP 2-45, line 10.

(d) Exhibit (PG&E-6), WP 2-45, line 10.

(e) Exhibit (PG&E-6), WP 2-45, line 10.

(f) Exhibit (PG&E-6), WP 2-45, line 10.

Adoption of CE's 2023 expense and capital forecast will allow PG&E to continue to deliver the service and support its customers need to manage their energy use and costs; provide proactive outreach, education, and awareness efforts to keep our customers and communities safe; and offer customers cleaner energy options and customer choice.

2. Summary of Request

a. Expense

PG&E requests that the Commission adopt its 2023 expense forecast of \$101.8 million for CE activities.⁶ The 2023 forecast

⁴ This excludes PG&E's future funding request for its Electric Vehicles Charging Network (EVCN) Phase 2 activities, for which PG&E plans to file an application in Q3 2021.

⁵ Exhibit (PG&E-6), WP 2-44, line 14.

⁶ Exhibit (PG&E-6), WP 2-1, line 9.

incorporates PSPS Planning and Readiness activities⁷ as well as ongoing operation and maintenance costs for PG&E's TE initiatives.

PG&E's 2020 expense forecast represents an increase of \$23.1 million over recorded adjusted costs of \$78.7 million. The forecast increase is primarily due to the transfer of existing shareholder-funded Customer Resiliency and Support Programs to GRC funding and increased customer demand for Non-Tariffed Products and Services.⁸ Non-Tariffed Products and Services expenses are offset by Other Operating Revenues (OOR) generated from Non-Tariffed Products and Services and credited back to customers.⁹

b. Memoranda of Understanding

PG&E also presents two Memoranda of Understanding (MOU) for Commission approval between PG&E and the Small Business Utility Advocates (SBUA), and PG&E and the Center for Accessible Technology (CforAT). The MOUs support PG&E's efforts to improve outreach and other support services for its small business customers and improve accessibility for its customers. PG&E describes these MOUs in further detail in Section B.2 below and includes them as Attachments A and B to this chapter.

c. Capital

PG&E requests that the Commission adopt the following capital forecasts for infrastructure costs to support PG&E's Electric Vehicle Infrastructure Program (EVIP) and PG&E's internal fleet vehicle program: \$8.6 million for 2023; \$9.4 million for 2024, \$4.7 million for 2025; and \$5.9 million for 2026.^{10,11}

⁷ PSPS Planning and Readiness costs were previously recorded to PG&E's WMBA and its FRMMA.

⁸ See Exhibit (PG&E-6), WP 2-27 for an overview of CE's recorded and forecasted expenses for each of the six CE program areas.

⁹ See Exhibit (PG&E-10), Ch. 16.

¹⁰ Exhibit (PG&E-6), WP 2-3, line 4.

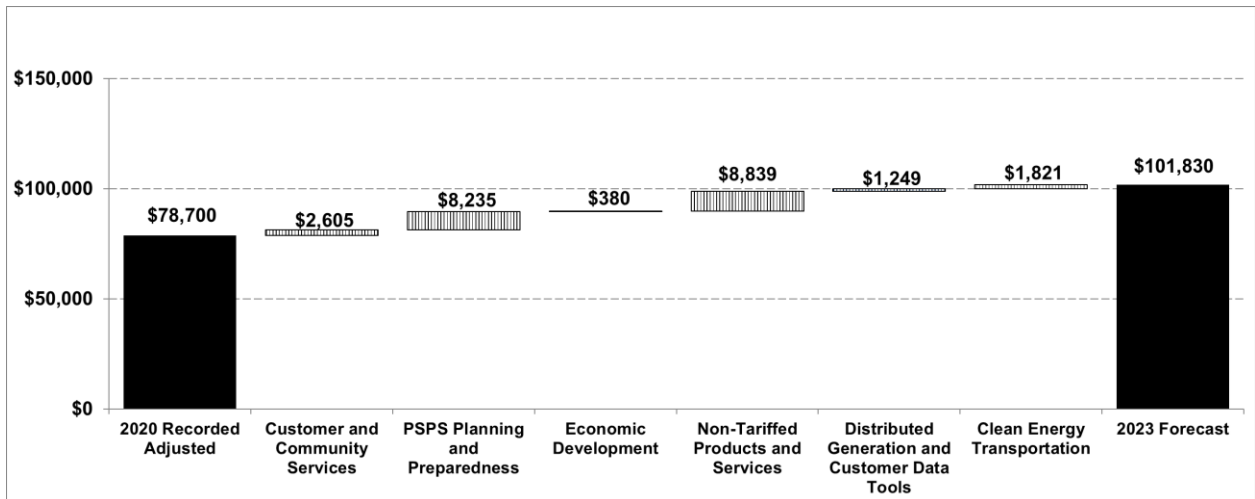
¹¹ See Exhibit (PG&E-7), Ch. 2 for the forecast of fleet vehicles and costs under the PG&E Fleet Electrification program.

3. Overview of Recorded and Forecast Costs

a. Expense

Figure 2-1 shows the change from the 2020 recorded adjusted expenses to the 2023 forecast for each of the six CE program areas. PG&E describes each of these program areas in more detail in Section B.2 and highlights key cost drivers in Section B.3.

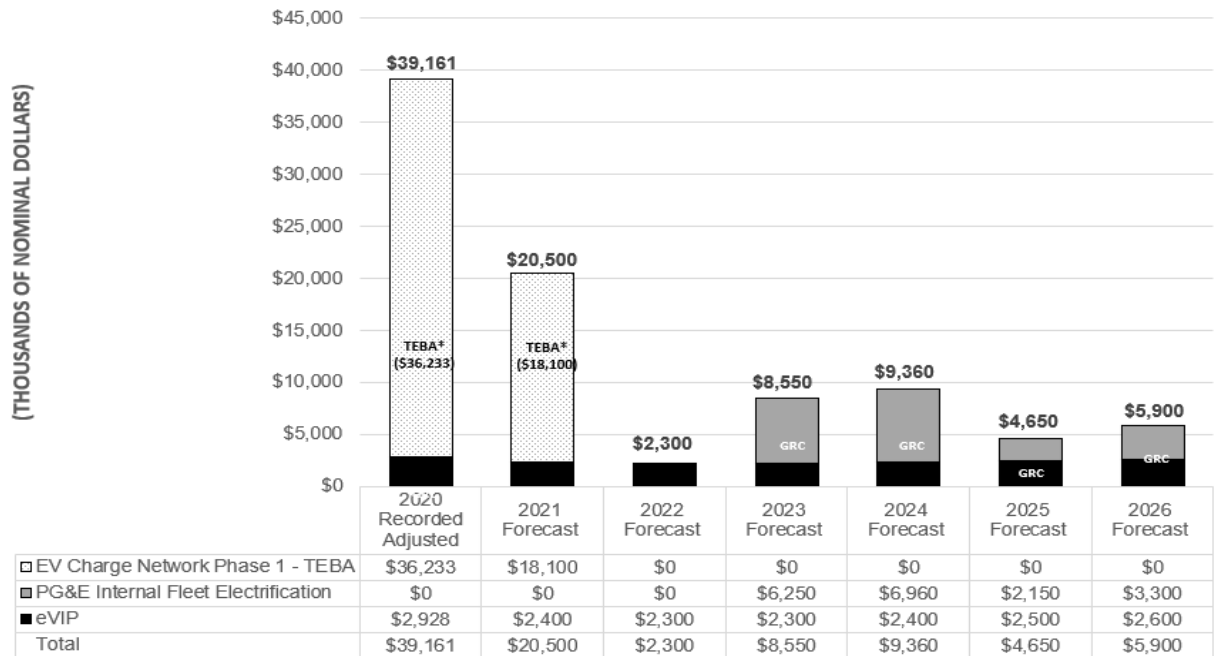
**FIGURE 2-1
CUSTOMER ENGAGEMENT
EXPENSE WALK (2020-2023)
(THOUSANDS OF NOMINAL DOLLARS)**



b. Capital

Figure 2-2 reflects CE's 2020 recorded adjusted capital expenditures and 2021-2026 forecast capital expenditures for infrastructure costs to support PG&E's EVIP and internal fleet vehicle program. Note that PG&E's 2020 recorded adjusted capital expenditures and 2021 forecast capital expenditures include costs that are separately funded and recovered through the TEBA (see Section F.3 for more information).

**FIGURE 2-2
CUSTOMER ENGAGEMENT
CAPITAL EXPENDITURES BY YEAR (2020-2026)**



*Transportation Electrification Balancing Account (TEBA) capital costs presented in the table are being recovered in the TEBA through 2022 but are included as they enter rate base recovered through GRC in 2023 and beyond.

4. Support for Request

PG&E's expense and capital forecasts are reasonable because they allow PG&E to offer customers services and support through the following programs:

- **Customer and Community Services:** Provides essential services to Large assigned customers, Small and Medium Businesses (SMB), and local communities; manages business relationships with third-party energy providers; and provides back-office customer support.
- **PSPS Planning and Readiness:** Conducts customer outreach, education, and awareness in preparation for PSPS events; and designs and administers programs to support customer resiliency initiatives and those intended to mitigate impacts of PSPS.
- **Economic Development:** Supports communities with job creation, employer attraction, and business-retention initiatives.
- **Non-Tariffed Products and Services:** Provides value-added products and services; and generates revenue using PG&E's existing assets, expertise, and knowledge.

- **Distributed Generation and Customer Data Tools:** Offers programs and tariffs that enable customer adoption of DG technologies and provides tools and resources to support customers who have or are interested in DG. Customer Data Tools uses interval data capabilities to offer new tools that enable customers to make data-driven decisions regarding energy use and optimize electric rate plans.
- **Clean Energy Transportation (CET):** Manages PG&E's TE initiatives, including incentives, education and outreach, and rate options to support customers' EV adoption. In addition, CET executes operations and maintenance (O&M) for PG&E's EV charging infrastructure, manages its workplace charging program (EVIP), and supports its internal EV fleet infrastructure deployment.

5. Organization of the Remainder of This Chapter

The remainder of this chapter is organized as follows:

- Section B – Program Overview;
- Section C – Activities and Costs by Major Work Category (MWC);
- Section D – Estimating Method;
- Section E – Balancing and Memorandum Accounts;
- Section F – Cost Tables; and
- Section G – Compliance with Prior Commission Decisions.

B. Program Overview

1. Management Structure

PG&E re-structured its Customer Care organization in March 2020 to better align customer service and support resources. With this change, PG&E established a Business Development and Customer Engagement team that is responsible for developing and administering customer-centric products, programs, and services. The Business Development and Customer Engagement team reports to the Senior Vice President (SVP) of Customer Care. The SVP of Customer Care reports to the Executive Vice President (EVP) of Customer and Communications who is also PG&E's Chief Customer Officer. PG&E established the EVP position in 2021 as described further in Exhibit (PG&E-6), Chapter 1.

The CE activities addressed in this chapter include the five departments shaded in Figure 2-3 below: Local Customer Experience (LCE), Business Energy Solutions, Customer Energy Solutions, New Revenue Development, and Business Operations.

**FIGURE 2-3
BUSINESS DEVELOPMENT AND CUSTOMER ENGAGEMENT**

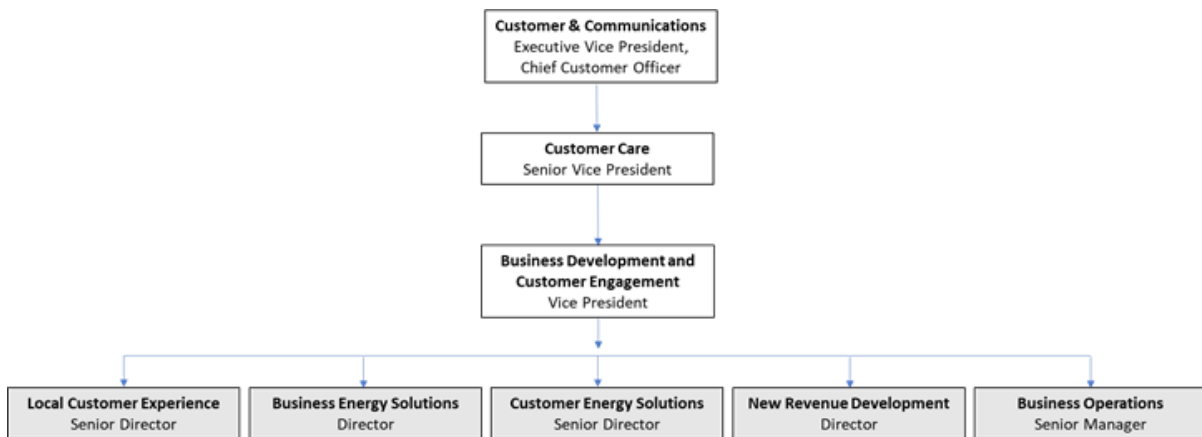


Table 2-2 provides additional detail on which departments in the Business Development and Customer Experience team support the CE activities described in this chapter. It also identifies the MWC used to track these activities and departments.

**TABLE 2-2
OVERVIEW OF CE PROGRAMS AND DEPARTMENTS**

Line No.	Program	MWC	PG&E Department
1	Customer and Community Services	MWC IV MWC DK	Business Energy Solutions Local Customer Experience Business Operations
2	PSPS Planning and Readiness	MWC IG	Business Energy Solutions Local Customer Experience Business Operations Customer Energy Solutions
3	Economic Development	MWC FK	Local Customer Experience
4	Non-Tariffed Products and Services	MWC EL	New Revenue Development
5	Distributed Generation and Customer Data Tools	MWC EZ	Customer Energy Solutions
6	Clean Energy Transportation	MWC CG MWC GM	Customer Energy Solutions

2. Program Overview

CE provides a broad array of support and services to PG&E's customers. As shown in Table 2-1 above and described in detail below, CE consists of six program areas: (1) Customer and Community Services; (2) PSPS Planning and Readiness; (3) Economic Development; (4) Non-Tariffed Products and Services; (5) Distributed Generation and Customer Data Tools; and (6) Clean Energy Transportation.

a. Customer and Community Services

Customer and Community Services consists of the following three departments which are described further below: Business Energy Solutions, Local Customer Experience, and Business Operations.

1) Business Energy Solutions

Business Energy Solutions advises and assists PG&E's non-residential customers with their utility service needs; manages customer accounts; educates and enrolls customers in Energy Efficiency (EE), Demand Response (DR), and other clean energy programs; and provides outreach and education on emergency and PSPS preparedness and readiness initiatives.

In 2020, Business Energy Solutions labor costs were funded as follows: (1) approximately 34 percent through Business Energy Solutions GRC funding; (2) approximately 66 percent through charge backs to other organizations or program balancing accounts.

PG&E's Business Energy Solutions team includes three groups that provide timely and relevant support to non-residential customers: Large Enterprise Accounts, Small Business Engagement, and Customer Success. PG&E describes these in further detail below.¹²

a) Large Enterprise Accounts

The Large Enterprise team provides account management to large, medium, and more complex customers. PG&E has over 4,400 large enterprise accounts, of which approximately 3,200 are assigned directly to a customer relationship manager (CRM).

The focus of the Large Enterprise team is to assist customers with their utility service needs, manage customer accounts, educate and enroll customers in clean energy programs, and support emergency operations including before, during, and after PSPS events.

b) Small Business Engagement

The Small Business Engagement team supports approximately 320,000 SMB customers by providing integrated products and services, onboarding new business customers through proactive outbound outreach, and participating in community business organization meetings and events.¹³ The team provides support for rate options, online tools, EE and

¹² Exhibit (PG&E-6), WP 2-29 includes additional information on the customer sectors and segments served within Business and Energy Solutions (BES).

¹³ PG&E defines a small business as a customer with an annual electric usage of less than 250,000 kilowatt per hour (kWh) per year and a medium business as a customer with an annual electric usage between 250,000 kWh and 500,000 kWh per year.

other energy savings opportunities, and outreach to support customers with rebuilding following major wildfires.¹⁴

c) **Customer Success**

The Customer Success team helps resolve business customer service issues by working cross-functionally with internal partners such as Billing Operations, Tariff Interpretation, Service Planning, Electric Generation Interconnections, and Metering. In addition, the Customer Success team serves as the primary point of contact to all customer-generators interconnected to PG&E transmission infrastructure. The Customer Success team also provides support to customers who elect core gas aggregation service (i.e., non-core).

2) **Local Customer Experience**

Local Customer Experience manages relationships with local customers and communities (e.g., cities, counties, and school districts) to improve the customer experience by driving collaboration across PG&E. This is done by targeting customer outreach for gas and electric programs and major projects, managing local customers relationships, and resolving complex local customer service issues.

Specifically, Local Customer Experience includes Division Teams that provide local customer service and issue resolution in support of core gas and electric operational work, lead cross functional engagement to solve customer and community issues at the city and county level, manage relationships with local customers such as cities, counties, and schools, and facilitate PG&E's cross-functional Division Leadership Teams (DLT). PG&E currently has 19 divisions in its service area.¹⁵ DLTs are comprised of local leaders from PG&E's gas, electric, and other LOBs, and are

¹⁴ See (PG&E-4), Ch. 23, for details on CEMA and other community rebuild efforts. See Exhibit (PG&E-6), WP 2-32, line 9 for CEMA rebuild costs forecasted in 2023.

¹⁵ PG&E's 19 divisions are: Humboldt, Sonoma, North Valley, Sierra, Sacramento, San Francisco, North Bay, East Bay, Diablo, Mission, Stockton, Yosemite, Fresno, Kern, San Jose, De Anza, Peninsula, Central Coast, and Los Padres.

facilitated by a Senior Manager or Director from the LCE Division Team organization. As PG&E transitions to the regional framework, the LCE Division Teams will support the Regional Vice Presidents in supporting local customer and community issues.

Additionally, LCE leads Escalated Complaints (Section B.2.a.3), PSPS Planning and Readiness (Section B.2.b), and Economic Development (Section B.2.c).

In 2020, LCE labor costs (not including PSPS Planning and Readiness or Economic Development) were funded as follows: (1) approximately 31 percent through LCE GRC funding; and (2) approximately 69 percent through charge backs to other organizations for activities such as customer outreach on major gas and electric projects and emergency response.

3) Escalated Complaints Management

PG&E's Escalated Complaints Management team responds to concerns and complaints that customers submit to the CPUC or escalate to PG&E's executive offices, the media, or other customer channels. In 2020, ECM managed 1,864 total concerns, including 826 escalated complaints, which includes CPUC, PG&E Executive, Government Relations, Regulatory Relations, and Media complaints.¹⁶ These complaints are primarily from residential customers and include complex issue resolution on topics such as billing and payment, service planning, vegetation management, power outages, and solar interconnections.

4) Third-Party Relations

PG&E's Third-Party Relations team focuses on establishing and managing PG&E's business relationships with Electric Service Providers who sell electricity to end-use customers participating in PG&E's Direct Access Service Program, Core Transport Agents who sell natural gas to end-use customers participating in PG&E's Core Gas Aggregation Service Program, and Community Choice

¹⁶ Exhibit (PG&E-6), WP 2-30, for more information on the total customer concerns by year.

Aggregators who sell electricity directly to customers.¹⁷ The Third-Party Relations team also partners with CRMs and other PG&E teams to help resolve third-party energy provider and customer issues, including customer enrollment, switching providers, metering, usage data, regulatory, programs, billing and payment, and credit and collections.

5) Business Operations

Business Operations provides the CE organizations with the back-office support required to manage centralized Business Energy Solutions account management and field-based Local Customer Experience teams. Specifically, it provides data analytics, reporting, forecasting, sales management and communication tools, and products and services training.

In 2020, Business Operations labor costs were funded as follows: (1) approximately 18 percent through Business Operations GRC funding; (2) approximately 82 percent through charge backs to other organizations or programs with balancing accounts.

b. PSPS Planning and Readiness

PG&E's most important responsibility is protecting the health, welfare, and safety of customers and communities. When severe weather or other circumstances threaten the ability to provide electricity safely, PG&E must take the appropriate steps necessary to protect the public. PG&E's PSPS program proactively de-energizes a portion of the Company's electric system, in the interest of public safety, as the wildfire prevention measure of last resort when there is a potential for a catastrophic wildfire should the lines be left energized. PG&E understands that de-energizing customers causes significant disruption and is actively working to reduce the impact on our customers. PG&E's PSPS Planning and Readiness initiatives are designed to help customers prepare for PSPS events and mitigate the impacts of PSPS during events. The four initiatives described below comprise only a

¹⁷ See Exhibit (PG&E-6), WP 2-31 for a description of Community Choice Aggregation, Direct Access, and Core Gas Aggregation Programs.

subset of PG&E's PSPS activities. Other PSPS mitigation activities (e.g., system hardening) are included in Exhibit 4.

PSPS Planning and Readiness includes three initiatives: Customer Outreach and Education, Customer Resiliency and Support Programs, and Research and Customer Insights. These initiatives enable PG&E to increase customer awareness of PG&E's PSPS program and design and administer programs to support customer resiliency.¹⁸

1) Customer Outreach and Education¹⁹

Customer Outreach and Education includes costs to prepare customers for PSPS events and to mitigate the risks associated with those events, especially for our most vulnerable customers. PG&E uses a combination of general awareness efforts and direct outreach to inform customers about PSPS planning and wildfire safety initiatives. This includes leveraging BES CRMs who coordinate with customers to effectively plan for the impacts of PSPS and wildfires and supporting their ability to safely operate facilities.

Customer Outreach and Education also includes costs associated with hosting webinars and listening sessions, translating critical PSPS and wildfire safety communications in 15 non-English languages, coordinating with community-based organizations (CBO) and Access and Functional Needs organizations (e.g., People with Disabilities and Aging Advisory Council), preparing digital channels and notification systems for in-event readiness, working with non-residential customers on PSPS readiness activities, training Contact Center and Customer Service Office (CSO) personnel to field customer inquiries, and general program management for customer-related outreach and education initiatives. Further, Outreach and Education activities center on data collection

¹⁸ For a more complete overview of PG&E's PSPS planning and readiness activities, please see R.18-10-007, PG&E's 2021 Wildfire Mitigation Plan (WMP), Sections 8.2.1, 8.2.4, and 8.4.

¹⁹ PSPS-related customer outreach and education activities as ordered by D.19-05-042, D.20-05-051, D.20-03-004, and R.18-10-007.

improvements to ensure the Company has the right customer contact information for all customers, particularly vulnerable customers. To that end, PG&E initiates outreach campaigns to encourage customers to update language preferences and offer customers opportunities to self-identify as vulnerable (e.g., vulnerable customer status) without impinging on data privacy laws, and promote enrollment in notification methods like address alerts for non-account holders (e.g., master meter tenants and renters).²⁰

2) Customer Resiliency and Support Programs²¹

Customer Resiliency and Support Programs includes costs to plan and administer programs that help mitigate safety risks during high wildfire risk conditions and PSPS events, particularly for customers with medical and independent living needs. These programs include:

- **Disability Disaster Access and Resources (DDAR) Program:** a joint effort with the California Foundation for Independent Living Centers (ILC) to help people living with disabilities, people with medical and independent living needs, and older adults to prepare for PSPS events. DDAR enables local ILCs to provide qualifying customers with access to backup portable batteries. It also provides accessible transportation resources, lodging, food and gas vouchers, emergency planning, and education and outreach about PG&E programs, such as the Medical Baseline (MBL) Program.²² In 2020, DDAR performed

²⁰ R.18-10-007, PG&E's 2021 Wildfire Mitigation Plan (February 5, 2021), p. 913.

²¹ Customer Resiliency and Support Programs as outlined in R.18-12-005 Phase 3 Scoping Memo. PG&E also committed to delivering these programs as part of its Wildfire Mitigation Plan in R.18-10-007.

²² The MBL Program offers eligible customers special MBL tariffs that allow them an additional allotment of electricity and/or gas per month. The tariffs are designed to assist residential customers who have special energy needs due to qualifying medical conditions.

1,750 customer energy assessments, delivered 1,000 batteries, and provided 900 food vouchers and 550 hotel stays.²³

- **Portable Battery Program:** provides free portable backup battery solutions to income-qualified²⁴ MBL customers in Tier 2 and 3 High Fire Threat Districts (HFTD) areas to support resiliency during PSPS events. Program costs also include customer outreach and power needs assessments. In 2020, PG&E's Portable Battery Program offered over 8,800 assessments and delivered over 5,550 batteries to PG&E's MBL customers.²⁵
- **Generator Rebate Program:** provides a rebate for qualifying backup generators or portable batteries to eligible residential customers and SMB customers located in a Tier 2 or 3 HFTD. PG&E's income-qualified customers²⁶ may be eligible for a higher incentive amount. This program was originally designed to offer rebates to residential customers who rely on pumped wells for water service. In 2021, PG&E expanded the program to include rebates for MBL customers ineligible for the Portable Battery Program, and SMB customers. In 2020, PG&E provided 108 well-pump generator incentives.²⁷

PG&E anticipates a growth in interest for these programs, which corresponds to the forecasted costs.

3) Research and Customer Insights²⁸

Research and Customer Insights supports research to evaluate the effectiveness of PSPS and wildfire safety outreach, identify

²³ Data as of January 19, 2021. R.18-10-007, PG&E's 2021 Wildfire Mitigation Plan p. 873.

²⁴ Eligible customers are those enrolled in the California Alternative Rates for Energy (CARE) or Family Electric Rate Assistance Program (FERA) programs.

²⁵ Data as of January 19, 2021. R.18-10-007, PG&E's 2021 Wildfire Mitigation Plan p. 875.

²⁶ Customers are those enrolled in the CARE or FERA programs.

²⁷ Data as of May 18, 2021.

²⁸ PSPS-related research activities as ordered in D.20-03-004 and R.18-10-007.

1 areas for improvement, and assess customer needs to help mitigate
 2 PSPS impacts. Qualitative research includes focus groups and
 3 input from advisory councils. Quantitative research involves
 4 representative surveys of a specific population (customers, CBOs,
 5 etc.) to test message awareness and recall, message
 6 understanding, and reported changes in behavior. Non-survey
 7 quantitative measures include web-traffic, click-through rates of
 8 advertisements and conversion rates/actions taken by customers as
 9 a result (e.g., attendance of a webinar updates made to contact
 10 information, or adoption of various customer programs).

11 In 2020, PG&E implemented six PSPS events that ranged in
 12 scale from affecting approximately 600 to 345,000 customers, and
 13 ranging in average total duration from 19 to 37 hours.²⁹ PG&E's
 14 PSPS Planning and Readiness initiatives are a key component to
 15 the Company's continued focus on further improving PSPS events
 16 for customers.

17 In 2020, PSPS Planning and Readiness labor costs were
 18 primarily charge-ins from other organizations, such as BES, LCE,
 19 Contact Center Operations, and CSOs.³⁰

20 **c. Economic Development**

21 PG&E's Economic Development program seeks to attract new
 22 employers to, and encourage existing businesses to remain in,
 23 California, thus supporting local job creation and retention in the cities
 24 and counties served by PG&E. PG&E's Economic Development
 25 program accomplishes this objective by coordinating with local and state
 26 Economic Development organizations and businesses to review rate
 27 options that are best suited for specific business types;³¹ offering
 28 reduced rate options to eligible businesses; estimating costs and
 29 responding to customer inquiries associated with new utility services;

²⁹ R.18-10-007, PG&E 2021 Wildfire Mitigation Plan, p. 846.

³⁰ Exhibit (PG&E-6), WP 2-32, for a detailed breakdown of charges for PSPS Planning and Readiness.

³¹ See Exhibit (PG&E-6), WP 2-35 for an overview of Economic Development organizations supported in 2020.

determining the service reliability and delivery options within a desired area; and sharing information on PG&E's clean energy programs to help lower the costs of expanding, relocating, or continuing business within PG&E's service area.

In 2020, Economic Development labor costs were funded 100 percent through GRC funding.

d. Non-Tariffed Products and Services

PG&E's Non-Tariffed Products and Services team uses an available portion of a PG&E asset or capacity to deliver products and services requested by customers.³² These services provide a benefit to commercial, industrial, and residential customers, as well as other utilities, power plant operators, and enterprise customers (all classified as third-party customers) that use them.³³

Revenue generated from the third-party customers that receive these products and services offsets PG&E customer rates and increases PG&E's asset utilization. Non-Tariffed Products and Services are offered to customers for a fee, the revenue offsets Non-Tariffed Products and Services expenses, and net revenue in excess of expenses is credited back to customers.³⁴ PG&E anticipates demand for these products and services to continue as customers with complex requirements benefit from using PG&E's assets and expertise.

PG&E offers Non-Tariffed Products and Services programs through its New Revenue Development Department. PG&E's New Revenue Development team works on a variety of projects that are either funded through the GRC or the Transmission Owner (TO) rate case at the Federal Energy Regulatory Commission (FERC). In 2020, New Revenue Development labor costs were funded as follows:

³² These are offered in compliance with Affiliate Transaction Rule VII. See D.06-12-029, Appendix A-1, p. 22, Sec. VII.C.4.a.

³³ See Exhibit (PG&E-6), WP 2-36 for examples of Non-Tariffed Products and Services offerings.

³⁴ See R.05-10-030, "Twenty-Fourth Periodic Report on Non-Tariffed Products and Services Offered by Pacific Gas and Electric Company, U 39 M," (August 25, 2020), submitted to the service list pursuant to D.97-12-088 as modified by D.06-12-029 and Rule VII.H of the Affiliate Transaction Rules.

(1) approximately 43 percent through NRD GRC funding and
 (2) approximately 57 percent through charge backs to FERC
 Transmission Owners and the Non-Tariffed Balancing Account.

e. Distributed Generation and Customer Data Tools

1) Distributed Generation

The Distributed Generation team manages incentive programs, tariffs, regulatory requirements, and initiatives to improve the customer experience for customers with Distributed Generation. This includes providing both residential and non-residential customers with support for technologies such as solar photovoltaic (PV), wind, fuel cell, and battery storage. The Distributed Generation team also develops and implements communication and education initiatives for operational integration of distributed generation tariffs, including Net Energy Metering (NEM) and its variants.³⁵ The number of distributed generation customers has grown significantly over the past several years. By the end of 2020, more than 500,000 PG&E customers adopted solar PV and other distributed generation technologies.³⁶ PG&E anticipates continued customer growth and interest in these technologies, which corresponds to an increase in forecasted costs.³⁷

In 2020, Distributed Generation labor costs were funded as follows: (1) approximately 32 percent through GRC funding; (2) approximately 68 percent through balancing accounts and charge backs to other organizations for activities such as bill redesign.

2) Customer Data Tools

The Data and Energy Management Products (DEMP) team manages Customer Data Tools that help residential customers and

³⁵ See Exhibit (PG&E-6), WP 2-42 for an overview of Distributed Generation tariffs.

³⁶ Exhibit (PG&E-6), WP 2-39 and WP 2-40.

³⁷ Exhibit (PG&E-6), WP 2-41.

businesses make data driven decisions regarding energy use and provide rate analysis tools to customers. These tools include:

- **Share My Data:** provides customers with interval meters the ability to authorize the release of their energy usage and other data to a registered third party.³⁸
- **Stream My Data:** helps residential and SMB customers understand how and when they are using electricity, and the related costs, by providing real-time electricity usage (kilowatt), price (\$/kWh), estimated costs to date, estimated monthly electric bill updates, and demand response alerts for SmartRate™ and peak day pricing events.³⁹
- **Assembly Bill (AB) 802/Building Benchmarking:** enables building owners and authorized agents to share their energy data with Energy Star Portfolio Manager (ESPM). Following the passage of AB 802, PG&E deployed a web portal that connects with ESPM to help benchmarking parties connect and map meters to a facility for aggregation.
- **Advanced Data Download (ADD):** enables customers with multiple accounts and service agreements to easily download their own electric or gas usage and billing information. This can be done for all of their accounts and service agreements with an interval meter.
- **Energy Data Request Program:** facilitates sharing of customer usage data with local governments, state and federal agencies, and academic researchers from nationally accredited institutions.

In 2020, DEMP labor costs were funded as follows:

- (1) approximately 24 percent through DEMP GRC funding; and
- (2) approximately 76 percent through charge backs to DR and other balancing account programs.

³⁸ D.13-09-025, p. 76, Ordering Paragraph (OP) 17.

³⁹ D.11-07-056 adopted rules to protect the privacy and security of the electricity usage data of investor-owned utilities (IOU) customer.

1 **f. Clean Energy Transportation**

2 The Clean Energy Transportation team provides clean
3 transportation programs and incentives that help California meet its
4 clean air and greenhouse gas (GHG) emission reduction goals. The
5 Clean Energy Transportation Team also provides education, and
6 outreach,⁴⁰ compliance and reporting, communication of rate plans
7 across various initiatives and projects, and ongoing support for EV
8 charging infrastructure.⁴¹

9 The number of EVs in PG&E's service territory has grown
10 significantly over the past three years. By the end of 2020, there were
11 over 320,000 cumulative EVs registered in PG&E's territory, which
12 roughly translates to approximately 275,000 EVs in operation throughout
13 PG&E's territory, almost double the 140,000 EVs in operation at the end
14 of 2017. In 2020, Governor Newsom issued an Executive Order (EO),
15 N-79-20, which calls for the elimination of new internal combustion
16 passenger vehicles by 2035.⁴² The California Air Resources Board
17 estimates that there may be up to approximately 8 million
18 Zero-Emissions Vehicle (ZEV) registered in California by 2030, to meet
19 the goals of the EO.⁴³ As such, PG&E anticipates continued interest in
20 EVs and EV sales due to the State's ambitious ZEV goals, which
21 corresponds to an increase in forecasted costs.

22 In 2020, the CET team's labor costs were funded as follows:
23 (1) approximately 14 percent through GRC funding and
24 (2) approximately 86 percent through TEBA and outside of the GRC,

40 Pursuant to D.11-07-029 (July 14, 2011), PG&E has an obligation to do "targeted Electric Vehicle education and outreach to educate customers about the environmental and societal benefits of Electric Vehicles consistent with the state's policy goals related to the reduction of [GHG] emissions set forth in AB 32." D.11-07-029, p. 68.

41 Exhibit (PG&E-6), Ch. 2 focuses on behind-the-meter infrastructure support. Exhibit (PG&E-4), Ch. 17 and Exhibit (PG&E-4), Ch. 18 focus on to-the-meter infrastructure support.

42 <https://ww2.arb.ca.gov/resources/fact-sheets/governor-newsoms-zero-emission-2035-executive-order-n-79-20> (as of June 11, 2021).

43 https://ww2.arb.ca.gov/sites/default/files/2021-04/Revised_Draft_2020_Mobile_Source_Strategy.pdf (as of June 11, 2021).

and non-earnings expense⁴⁴ to support deployment of EV infrastructure and clean fuel vehicle rebates.

3. 2023 Forecast Drivers

a. Expense Drivers

1) Non-Tariffed Products and Services

PG&E forecasts an increase of \$8.8 million for 2023 relative to 2020 recorded costs for Non-Tariffed Products and Services.⁴⁵ The increase is primarily attributable to \$7.3 million forecasted for increased demand for Non-Tariffed Products and Services such as the Utility Energy Services Contract (UESC) and Sustainable Solutions Turnkey (SST) programs.⁴⁶ It is also attributable to a forecasted \$1.5 million increase in labor to support increased demand for Non-Tariffed Products and Services as well as escalation.⁴⁷

PG&E's Non-Tariffed Products and Services expenses are offset by Other Operating Revenues generated from Non-Tariffed Products and Services and credited back to customers.⁴⁸ The forecast will allow PG&E to continue to deliver products and services that customers want, where asset capacity is available, to benefit customers.

⁴⁴ Non-earnings expense refers to non-ratepayer funded expense to support PG&E's administration of the Low Carbon Fuel Standard program (LCFS). PG&E's implementation of the LCFS credit sales and revenue return program conforms to the standards described in PG&E's Advice Letter (AL) 3575-G/4604-E (Implementation Plan), filed March 18, 2015 and approved by the Commission on August 7, 2015. PG&E's implementation of sale and revenue return in future years will conform to additional implementation plans to be submitted.

⁴⁵ Exhibit (PG&E-6), WP 2-37, for Non-Tariffed Products and Services Expense Forecast Details.

⁴⁶ Exhibit (PG&E-6), WP 2-36, for examples of Non-Tariffed Products and Services Offerings, including UESC and SST. See Exhibit (PG&E-6), WP 2-21, lines 2, 5, and 7, for more information on PG&E's non-labor expense forecast for Non-Tariffed Products and Services.

⁴⁷ Exhibit (PG&E-6), WP 2-37, line 1 and WP 2-21, lines 3, 6, and 9 for an overview of forecasted Non-Tariffed Products and Services labor costs.

⁴⁸ See Exhibit (PG&E-10), Ch. 16 for Other Operating Revenues.

2) PSPS Planning and Readiness

PG&E forecasts an increase of \$8.1 million for 2023 relative to 2020 recorded costs for PSPS Planning and Readiness.⁴⁹ The increase is primarily attributable to a transfer of approximately \$7.3 million in existing shareholder-funded Customer Resiliency and Support programs to the GRC beginning in 2023.⁵⁰ PG&E describes these programs in further detail in Section B.2.c.2.

3) Customer and Community Services

PG&E forecasts an increase of \$2.1 million relative to 2020 recorded costs for Customer and Community Services.⁵¹ This increase is primarily attributable to labor and non-labor escalation of \$1.4 million.⁵²

4) Clean Energy Transportation

PG&E forecasts an increase of \$2.0 million relative to 2020 recorded costs for Clean Energy Transportation.⁵³ This increase is attributable to an increase of approximately \$1.0 million for O&M for EV charging infrastructure originally deployed under the following Balancing Account-funded programs: Electric Vehicle Charge Network (EVCN), FleetReady,⁵⁴ Direct Current Fast Charger Make-Ready (Fast Charge),⁵⁵ and EV Charge Schools and Parks.^{56,57}

It is also attributable to an increase of approximately \$1.0 million to support the Clean Energy Transportation team's expanded scope

⁴⁹ Exhibit (PG&E-6), WP 2-32, for PSPS Planning and Readiness Expense Forecast Details.

⁵⁰ Exhibit (PG&E-6), WP 2-17, lines 10-12.

⁵¹ Exhibit (PG&E-6), WP 2-17, lines 1 and 12.

⁵² Exhibit (PG&E-6), WP 2-17, lines 2-3, 6-7, 9-10.

⁵³ Exhibit (PG&E-6), WP 2-44, for Clean Energy Transportation Expense Forecast Details.

⁵⁴ D.18-05-040.

⁵⁵ D.18-05-040.

⁵⁶ D.19-11-017.

⁵⁷ Exhibit (PG&E-6), WP 2-46, for PG&E's Clean Energy Transportation's 2023 O&M forecast for each of these programs.

1 due to the growth of EV programs.⁵⁸ This includes labor associated
 2 with strategy, policy, and rates support; labor to manage PG&E's
 3 EVIP program; and labor to manage the deployment of EV charging
 4 infrastructure for PG&E's internal fleet electrification,⁵⁹ which is
 5 described further in Section B.3.b below.

6 **b. Capital Drivers—Clean Energy Transportation**

7 PG&E forecasts total capital of \$51.3 million for Clean Energy
 8 Transportation programs from 2021-2026. From this total, PG&E
 9 forecasts approximately \$18.1 million in costs that it will recover through
 10 the TEBA.⁶⁰ PG&E's forecast for the remaining \$33.2 million in GRC
 11 costs includes \$2.4 million in 2021, \$2.3 million in 2022, \$8.6 million in
 12 2023, \$9.4 million in 2024, \$4.7 million in 2025, and \$5.9 million in 2026.

13 PG&E GRC capital forecast for Clean Energy Transportation
 14 programs is driven by support for the EVIP (\$14.5 million from
 15 2021-2026) and PG&E's Internal Fleet Electrification Program
 16 (\$18.7 million from 2021-2026). PG&E discusses its forecast for these
 17 programs in further detail below.

18 **1) Electric Vehicle Infrastructure Program**

19 PG&E's capital forecast of \$14.5 million for the EVIP from
 20 2021-2026 includes \$2.4 million in 2021, \$2.3 million in 2022,
 21 \$2.3 million in 2023, \$2.4 million in 2024, \$2.5 million in 2025, and
 22 \$2.6 million in 2026.⁶¹ PG&E's EVIP supports the deployment of EV
 23 charging stations for employees at PG&E locations across its
 24 service area.

25 PG&E previously requested funding for the EVIP in the 2020
 26 GRC in Exhibit (PG&E-7), Chapter 2, Transportation and Aviation
 27 Services. The Commission found that PG&E's Transportation and
 28 Aviation Services forecast was reasonable in Decision

⁵⁸ Exhibit (PG&E-6), WP 2-44, lines 2, 3, and 12.

⁵⁹ Exhibit (PG&E-6), WP 2-44, lines 2, 3, and 12.

⁶⁰ D.18-05-040 and D.19-11-017 authorized PG&E to continue recording costs associated with Transportation Electrification Projects in the TEBA until its 2023 GRC.

⁶¹ Exhibit (PG&E-6), WP 2-45, line 1.

(D.) 20-12-005.⁶² PG&E proposes to continue this project to support the growing employee demand for EV charging infrastructure. PG&E forecasts an increase in capital for this project from 2023 to 2026 to reflect the anticipated increase in charging stations that PG&E will deploy during the 2023 GRC period.⁶³

2) PG&E Internal Fleet Electrification Program

PG&E's capital forecast of \$18.7 million for the Internal Fleet Electrification Program from 2021-2026 includes \$6.3 million in 2023, \$7.0 million in 2024, \$2.2 million in 2025, and \$3.3 million in 2026.⁶⁴ PG&E's Internal Fleet Electrification Program aims to electrify PG&E's vehicle fleet and aims to have 1,048 fleet EVs in operation by 2026.

PG&E's forecast for the Internal Fleet Electrification Program in CE includes the capital needed to deploy fleet vehicle charging infrastructure at PG&E fleet locations. Costs do not include procurement of vehicles, which is forecast in the Transportation and Aviation Services chapter.⁶⁵ PG&E forecasts increased costs in 2023 and 2024 to serve large facilities with early EV deployment and to minimize site disruption and cost by constructing infrastructure in 2023 and 2024 that will require only incremental spend in 2025 and 2026.⁶⁶

C. Activities and Costs by MWC

1. Expense MWCs

a. MWC IV (Provide Account Services)

PG&E's 2023 forecast of \$17.6 million for MWC IV includes essential customer service support for PG&E's Large customers, small business customers, local communities through the LCE team,

⁶² D.20-12-005, Conclusion of Law 66.

⁶³ Exhibit (PG&E-6), WP 2-45, line 2.

⁶⁴ Exhibit (PG&E-6), WP 2-45, line 7.

⁶⁵ See Exhibit (PG&E-7), Ch. 2 for the forecast of fleet vehicles and costs under the PG&E Fleet Electrification program.

⁶⁶ Exhibit (PG&E-6), WP 2-45, line 8.

management of business relationships with third-party energy providers, and back-office support.⁶⁷

b. MWC DK (Manage Customer Inquiries)

PG&E's 2023 forecast of \$1.9 million for MWC DK supports PG&E's Escalated Complaints Management team, which responds to concerns and complaints that customers submit to the CPUC or escalate to PG&E's Executive Offices, the media, or other channels.⁶⁸

c. MWC IG (Manage Var Bal Acct Processes)

PG&E's 2023 forecast of \$24.4 million for MWC IG supports critical PSPS planning and readiness work to support our customers before, during and after PSPS events.⁶⁹

d. MWC FK (Retain and Grow Customers)

PG&E's 2023 forecast of \$0.7 million for MWC FK supports economic development efforts that promote local job creation and help keep businesses in California while also attracting new employers to the state.⁷⁰

e. MWC EL (Develop New Revenue)

PG&E's 2023 forecast of \$49.9 million for MWC EL supports PG&E's efforts to offer additional services with existing assets to generate revenue, which reduces the costs of service in customer rates.⁷¹

f. MWC EZ (Manage Various Customer Care Processes)

PG&E's forecast of \$3.8 million for MWC EZ supports activities to measure, analyze, and improve customer satisfaction, facilitate customer adoption of DG technologies, and help customers understand their energy usage through data tools. The forecast also supports

⁶⁷ Exhibit (PG&E-6), WP 2-17.

⁶⁸ Exhibit (PG&E-6), WP 2-18.

⁶⁹ Exhibit (PG&E-6), WP 2-19.

⁷⁰ Exhibit (PG&E-6), WP 2-20.

⁷¹ Exhibit (PG&E-6), WP 2-21.

activities to coordinate implementation of Rulemaking (R.) 20-08-020,⁷²
which will determine the next phase of NEM-related tariffs.^{73,74}

g. MWC CG (Clean Air Transportation Balancing Account)

PG&E's does not forecast any costs for MWC CG in 2023. PG&E's
2021 and 2022 forecast for MWC CG includes O&M costs for
prior-installed EV chargers. PG&E is transitioning the forecast for
continued O&M to MWC GM in 2023, which is approximately
\$1.7 million.⁷⁵

h. MWC GM (Manage EE-NonBA)

PG&E's 2023 forecast of \$3.5 million for MWC GM includes EV
customer support, education, and outreach on clean fuel usage and EV
rates to help California meet GHG emission reduction goals.⁷⁶

2. Capital MWCs

a. MWC 28 (EV Infrastructure)

PG&E's 2023-2026 capital forecast of \$28.5 million for MWC 28
supports PG&E's EVIP and PG&E's Internal Fleet Vehicle Programs.⁷⁷

b. MWC 3M (Install/Repl Var Bal Acct)

PG&E is not forecasting any capital costs in 2021-2026 for
MWC 3M. PG&E's 2020 recorded costs include \$36.2 million in
MWC 3M that is associated with TE programs that are separately
tracked and recovered through the TEBA.⁷⁸

⁷² Order Instituting Rulemaking to Revisit Net Energy Metering (NEM) Tariffs Pursuant to D.16-01-044.

⁷³ PG&E plans to request a memorandum account for future cost recovery consideration to record the costs of all additional activities required from R.20-08-020, with a decision expected in Q1 2022.

⁷⁴ Exhibit (PG&E-6), WP 2-22.

⁷⁵ Exhibit (PG&E-6), WP 2-24.

⁷⁶ Exhibit (PG&E-6), WP 2-23.

⁷⁷ Exhibit (PG&E-6), WP 2-25.

⁷⁸ Exhibit (PG&E-6), WP 2-26.

3. Memorandum of Understanding with the Small Business Utility Advocates

PG&E has entered into an MOU with SBUA regarding service and support to PG&E's small business customers during the 2023 GRC period. The MOU is attached as Attachment A of this chapter and is jointly presented by PG&E and SBUA for Commission approval.

The MOU reflects PG&E's continued commitment to serving its SMB customers, as well as its continued collaboration and partnership with SBUA on these issues. Specifically, the MOU provides that PG&E will direct \$6.5 million annually to provide outreach and support for PG&E's SMB customers through its Small Business Engagement program and other activities that benefit SMB customers.⁷⁹

The MOU reflects the Parties' agreement on a broad set of activities and initiatives including the following to which PG&E commits:

- Spend the authorized funds on support for SMB outreach and engagement through digital and other communication channels, with a focus on disadvantaged communities;
- Continue to provide outreach and support through its Small Business Engagement organization to connect SMB customers to PG&E tools, resources, programs, service, and integrated demand-side management offerings;
- Continue to maintain and improve its dedicated website for SMB customers and the "Your Account" portal to allow SMBs and other commercial customers to indicate their preferred communication method for account notifications;
- Continue supporting Economic Development activities and working with SMBs to identify contracting opportunities;
- Provide education and assistance to SMBs to help them complete the necessary processes and applications to secure contracts to provide materials and services to PG&E; and
- Conduct a high-level study on small businesses in Environmental and Social Justice communities.

⁷⁹ See Exhibit (PG&E-6), Ch. 2, Attachment A.

4. Memorandum of Understanding with the Center for Accessible Technology

PG&E has entered into a MOU with CforAT regarding improving customer accessibility during the 2023 GRC period. The MOU is attached as Attachment B of this chapter and is jointly presented by PG&E and the CforAT for Commission approval. The Parties agree that PG&E will spend \$1.7 million per year on activities to improve accessibility including:

- Disability Access Coordinator and Related Work;
- Website Accessibility;
- Communications Access Issues;
- Local Offices;
- Neighborhood Payment Centers; and
- Temporary Construction Practices.

Additionally, the Parties agree that PG&E will prioritize the accessibility of customer communications and engagement around the issue of de-energization. Further the Parties agree to meet and confer via Application (A.) 20-06-011 should any issues arise regarding the impact of the implementation of the Regionalization Proposal on PG&E's ability to continue to maintain the level of service it provides to customers with disabilities.

D. Estimating Method

PG&E's 2023 forecast for CE was developed using recorded adjusted 2020 expenses. These recorded adjusted expenses were adjusted for labor and non-labor escalation, consistent with escalation rates described in Exhibit (PG&E-8), Chapter 4, and Exhibit (PG&E-12) Chapter 3, respectively. Further adjustments were made to reflect changes in program activity, as described elsewhere in this chapter.

E. Compliance with Prior Commission Decisions

1. Stipulation with the National Diversity Coalition

The Commission adopted a stipulation between PG&E and National Diversity Coalition (NDC) as part of its decision approving PG&E's 2020

GRC (D.20-12-005).⁸⁰ In the stipulation, PG&E committed to tracking and reporting in the next GRC on safety-related outreach related to communities of color and underserved communities.⁸¹ The stipulation defines safety-related outreach as:

- Work driven by specific gas or electric projects and directed toward communities impacted by those projects;
- General public outreach not related to a particular project; and
- To the extent possible, Public Safety Power Shutoff and other emergency communications.⁸²

PG&E and NDC agreed to identify communities of color and underserved communities using areas that are in the top 25 percent of CalEnviroScreen 3.0 scores and have a minimum of 30 percent CARE eligible customers.⁸³ PG&E committed to sharing a copy of the zip codes with NDC prior to preparing the report for the 2023 GRC.⁸⁴

PG&E identified the list of zip codes and shared it with NDC. NDC did not object to the zip code list. As described in the stipulation, PG&E includes an overview of safety-related outreach spending for each required zip code in WP 2-47 to 2-52. This includes spend related to outreach for specific gas and electric projects, and in-event PSPS outreach, including Community Resource Centers that PG&E establishes in impacted communities during PSPS events.⁸⁵

PG&E's general safety-related outreach cannot be broken out by zip code as general outreach activities are designed to reach a broad population of customers. Spending is not directed to, or tracked by, zip codes but rather designated market areas (DMA). General safety outreach spend includes costs associated with television, radio, and digital media.

⁸⁰ D.20-12-005, pp. 327-328.

⁸¹ A.18-12-009, Hearing Exhibit (HE)-172: Stipulation Between NDC and PG&E, p. 4.

⁸² A.18-12-009, HE-172: Stipulation Between NDC and PG&E, p. 4.

⁸³ A.18-12-009, HE-172: Stipulation Between NDC and PG&E, p. 4.

⁸⁴ A.18-12-009, HE-172: Stipulation Between NDC and PG&E, p. 4.

⁸⁵ PG&E was unable to break out non-event PSPS customer outreach expenditures by COC zip codes given its broad reach. PSPS non-event customer outreach spending is not directed or tracked by zip codes. 2020 non-event PSPS outreach expenditures totaled \$10,251,716.

PG&E also shows total in-language media expenditures. PG&E presents safety-related general outreach via DMAs, including in-language media expenditures, in WP 2-57. NDC and PG&E have met and conferred about the presentation of general safety outreach spend by DMA and agree that such presentation is reasonable.

2. Memorandum of Understanding with the Small Business Utility Advocates

The Commission adopted a MOU between PG&E and SBUA as part of its decision approving PG&E's 2020 GRC (D.20-12-005).⁸⁶ In the MOU, PG&E states:

PG&E will examine and submit high-level testimony in PG&E's 2023 GRC Phase 1 with a study and report that; (1) measures the existing adoption rates by Small Business of Distributed Energy Resources (DER) and evaluates the need to increase marketing, education, and outreach to Small Businesses to increase their adoption of DER; and (2) examines the potential need for dedicated funding in the GRC Phase 1 to assist Small Business to increase their adoption of DER. The scope of the study and report will be jointly determined by agreement between PG&E and SBUA and funded as part of PG&E's otherwise existing annual spending requirement. For purposes of this section, DER is defined to include distribution-connected distributed generation resources, energy efficiency, energy storage, electric vehicles, and demand response technologies.⁸⁷

PG&E and SBUA agreed to extend the completion of the study and report to the end of 2022, as explained in the 2023 MOU. Once complete, PG&E will serve the final report to the 2023 GRC service list.

F. Balancing and Memorandum Accounts

1. Planning and Readiness Costs – Wildfire Mitigation Balancing Account (WMBA-E) and Wildfire Memoranda Accounts

Table 2-3 provides a snapshot of the balancing and memo accounts PG&E uses to track its PSPS Planning and Readiness costs.

⁸⁶ D.20-12-005, pp. 164-165.

⁸⁷ A.18-12-009, HE-91: Exhibit (PG&E-6), Ch. 2A, pp. 3-4.

TABLE 2-3
OVERVIEW OF PSPS PLANNING AND READINESS COST TRACKING ACCOUNTS

Line No.	Activity	Cost Tracking Accounts			
		2020	2021	2022	2023-2026
1	Outreach & Education, Research & Insights	WMBA-E	WMBA-E	WMBA-E	WMBA-E
2	Customer Resiliency and Support Programs	FRMMA ^(a)	WMPMA	WMPMA	WMBA-E
(a) In 2020, PG&E used the Fire Risk Mitigation Memorandum Account (FRMMA) for tracking purposes only, and is not seeking cost recovery of 2020 costs associated with our Customer Resiliency and Support Programs.					

a. Wildfire Mitigation Balancing Account (WMBA-E)

The WMBA-E records associated expenses and capital revenue requirements for fire risk mitigation work, allocated to the electric distribution and generation functions. These costs include, but are not limited to, expenses and the revenue requirements associated with capital expenditures for advanced system hardening and resiliency; expanded automation and protection; improved wildfire detection; and enhanced operational practices including work related to PSPS events.

PG&E uses the WMBA to track costs associated with our PSPS-related outreach and education, research, and customer insights to the GRC. These costs include outreach and education for BES, LCE, and Contact Centers, PSPS mass market message broadcasting, and customer research through the Customer Experience group.⁸⁸ PG&E proposes continued use of the two-way WMBA to record wildfire mitigation related activities, including those activities described in this application.⁸⁹

b. Wildfire Memoranda Accounts

In addition to the WMBA, PG&E has established two memorandum accounts where certain wildfire-related costs can be recorded – the Wildfire Mitigation Plan Memorandum Account (WMPMA) and the FRMMA.

⁸⁸ Exhibit (PG&E-6), WP 2-32, lines 2-9.

⁸⁹ See Exhibit (PG&E-4), Ch. 4.

1 The purpose of the WMPMA is to record incremental costs incurred
 2 to implement an approved WMP that are not otherwise recovered in
 3 PG&E's adopted revenue requirements.⁹⁰ Such costs include expense
 4 and capital expenditures for wildfire risk mitigation activities outlined in
 5 PG&E's WMP, including enhanced inspection activities in excess of
 6 what was authorized in PG&E's existing GRC. Costs in the WMPMA
 7 are subject to reasonableness review.

8 The purpose of the FRMMA is to record incremental costs of fire risk
 9 mitigation work that are not otherwise recovered in PG&E's adopted
 10 revenue requirements.⁹¹ Such costs include wildfire mitigation activities
 11 that were not contemplated as part of the prior GRCs or WMPs. Costs
 12 to be recovered through the FRMMA do not include costs approved for
 13 recovery in PG&E's GRCs or through other cost recovery mechanisms
 14 including WMPMA. Costs in the FRMMA are subject to reasonableness
 15 review.

16 Starting January 1, 2023, PG&E is proposing to move expense
 17 costs associated with its Customer Resiliency and Support Programs
 18 (e.g., DDAR, Portable Battery Program and Generator Program) to the
 19 GRC and proposes to use the two-way WMBA to record these
 20 activities.⁹²

21 **2. California Distributed Generation Statistics Website Memorandum** 22 **Account**

23 The Commission authorized the California Distributed Generation
 24 Statistics Website Memorandum Account (CDGSWMA) in Resolution
 25 (Res.) E-5030. Pursuant to Res.E-5030 OP 10, the electric IOUs contracted
 26 with a vendor to manage the California Distributed Generation Statistics (DG

⁹⁰ D.19-05-037, p. 64, OP 21, authorized PG&E to open the WMPMA to track incremental wildfire-related costs incurred while implementing approved programs within the 2019 WMP. On June 5, 2019, PG&E submitted AL 5555-E to establish the WMPMA. The AL was approved by the Commission on August 8, 2019 with an effective date of June 5, 2019.

⁹¹ On November 1, 2018, PG&E submitted AL 5419-E to establish the FRMMA to track costs incurred for fire risk reduction that are not otherwise encompassed in the Company's revenue requirement. The Commission approved AL 5419-E on March 12, 2019, effective January 1, 2019.

⁹² Exhibit (PG&E-6), WP 2-32, lines 12-14.

Stats) website from January 1, 2020 to December 31, 2022. In Res.E-5030, the Commission also directed each IOU to create a memorandum account to track costs from the DG Stats vendor. In the 2020 GRC, PG&E requested \$208,000 to fund DG statistics work. All costs above that amount were to be recorded in and recovered through the DG Stats Memo account. Further, PG&E must cease booking costs to the CDGSWMA after the effective date of the rates established by its test year 2023 GRC.

~~PG&E expects \$224,630 to be booked to the CDGSWMA by the end of 2022 and is seeking recovery of that amount in this GRC along with closure of the memo account once recorded balances through December 31, 2022 are recovered, consistent with Res.E-5030. A full reasonableness review and request for recovery for costs recorded is included as Attachment C of this chapter.~~

3. Transportation Electrification Balancing Account

PG&E proposes that recovery of all O&M for the Charge Smart and Save Program Subaccount, Fast Charge Program Subaccount, Fleet Ready Program Subaccount, EV Charge Parks Subaccount, and EV Charge Parks Subaccounts be through the GRC beginning in 2023. All non-O&M costs (capital and expenses) for programs recorded in the Fast Charge Program Subaccount, Fleet Ready Program Subaccount, EV Charge Parks Subaccount, and EV Charge Parks Subaccounts will continue to be through the TEBA. Additionally, since implementation of Phase 1 EVCN program (Charge Smart and Save Program Subaccount) will conclude by 2023, all other ongoing costs associated with that program will be recovered through the GRC beginning in 2023. As a result, the Charge Smart and Save Program Subaccount in the TEBA will be closed effective January 1, 2023.

PG&E provides a detailed explanation in Sections a-d, below. Table 2-4 provides a snapshot of the existing and proposed cost recovery mechanisms for TE activities.

TABLE 2-4
OVERVIEW OF CET COST TRACKING ACCOUNTS

Line No.	Activity	Cost Tracking Accounts			
		2020	2021	2022	2023-2026
1	Electric Vehicle Charge Network (EVCN) Phase 1 Program	TEBA	TEBA	TEBA	GRC (O&M)
2	EV Fleet Program	TEBA	TEBA	TEBA	GRC (O&M)
3	Fast Charge Program	TEBA	TEBA	TEBA	GRC (O&M)
4	EV Charge Parks and EV Charge Schools Pilot Programs	TEBA	TEBA	TEBA	GRC (O&M)

a. EVCN Phase 1 Program (Recorded to the Charge Smart and Save Program Subaccount)

PG&E is authorized to recover a revenue requirement associated with up to \$130 million in capital, O&M, expense, rebate, and education and outreach costs for the EVCN program (or Charge Smart and Save Program). Of the \$130.0 million, there is a \$10.0 million cap authorized for Education and Outreach proposal costs.

PG&E is proposing to move O&M expenses associated with this program into the 2023 GRC.

As program build-out will be complete by 2023, all residual O&M spend in 2023 and beyond will be fully transitioned to 2023 GRC. Therefore, PG&E proposes to remove the EVCN, or Charge Smart and Save, Program Subaccount from the TEBA since it is no longer necessary.

b. EV Fleet Program (Recorded to the Fleet Ready Program Subaccount)

Pursuant to D.18-05-040, PG&E is authorized to recover a revenue requirement associated with a total expenditure cap of \$236,325,000 in capital and expense costs for the EV Fleet program, (or Fleet Ready Program).

Capital will continue to be recovered through the TEBA through the end of all project deployment, which is expected to be 2024 for the EV Fleet program (or Fleet Ready Program). O&M will be covered through the balancing account until December 31, 2022. Starting January 1,

2023, PG&E has included a forecast for O&M expenses as part of its GRC for this program.

c. Fast Charge Program (Recorded to the Fast Charge Program Subaccount)

Pursuant to D.18-05-040, PG&E is authorized to recover a revenue requirement associated with an expenditure cap of \$22,394,041 in capital and expense for the Fast Charge Program.

Capital will continue to be recovered through the TEBA through the end of all project deployment, which is expected to be 2025 for the Fast Charge Program. O&M will be covered by the balancing account until December 31, 2022. Starting January 1, 2023, O&M expenses will be covered as part of PG&E's GRC for this program.

d. EV Charge Parks and EV Charge Schools Pilot Programs (Recorded to the EV Charge Parks Subaccount and EV Charge Schools Subaccount)

Pursuant to D.19-11-017, PG&E is authorized to recover revenue requirements associated with up to \$5.54 million and \$5.76 million in capital and expense for the EV Charge Parks and EV Charge Schools Pilot Programs, respectively.

Capital will continue to be recovered through the TEBA through the end of all project deployment, which is expected to be two years after initial break ground on the first project in each respective Program; this is anticipated in 2021-2022. O&M will be covered through the balancing account until December 31, 2022. Starting January 1, 2023, PG&E has included a forecast for O&M expenses as part of its GRC request for these programs.

G. Cost Tables

PG&E's forecast for CE is summarized in the following tables:

- Table 2-5 shows 2016 through 2020 recorded adjusted expenses and 2021 through 2023 forecast expenses by MWC; and
- Table 2-6 shows 2016 through 2020 recorded adjusted capital expenditures and 2021 through 2026 forecast capital expenditures by MWC.

TABLE 2-5
CUSTOMER ENGAGEMENT
EXPENSES BY MWC
(THOUSANDS OF NOMINAL DOLLARS)

Line No.	MWC	MWC Description	Recorded Adjusted					Forecast			Workpaper Reference
			2016	2017	2018	2019	2020	2021	2022	2023	
1	AB	Misc Expense	-	-	-	-	-	-	-	-	-
2	CG ^(a)	CAT Balancing Accounts	-	-	\$120	\$27	\$156	\$1,714	\$1,748	-	WP 2-14, 2-24
3	DK	Manage Customer Inquiries	\$786	\$906	1,181	1,302	1,344	1,813	1,874	\$1,895	WP 2-8, 2-18
4	EL	Develop New Revenue	27,948	22,716	39,017	40,918	41,013	71,598	48,002	49,851	WP 2-11, 2-21
5	EZ	Manage Var Cust Care Processes	3,380	3,029	2,643	1,511	2,537	3,583	3,702	3,786	WP 2-12, 2-22
6	FK	Retain & Grow Customers	744	813	966	646	356	704	725	736	WP 2-10, 2-20
7	GM	Manage Energy Efficiency-NonBA	1,728	590	247	562	1,570	1,978	2,035	3,547	WP 2-13, 2-23
8	IG	Manage Var Bal Acct Processes	-	-	2,090	10,962	16,152	16,402	16,826	24,387	WP 2-9, 2-19
9	IV	Provide Account Services	17,463	17,325	15,064	14,760	15,573	16,109	16,618	17,628	WP 2-7, 2-17
10		Total	\$52,049	\$45,378	\$61,329	\$70,687	\$78,701	\$113,901	\$91,530	\$101,830	

(a) MWC CG costs are funded through TEBA balancing account. The costs represented here are for trending and cover O&M which will become GRC-funded in 2023 and beyond.

TABLE 2-6
CUSTOMER ENGAGEMENT
CAPITAL BY MWC
(THOUSANDS OF NOMINAL DOLLARS)

Line No.	MWC	MWC Description	Recorded Adjusted					Forecast					Worksheet Reference	
			2016	2017	2018	2019	2020	2021	2022	2023	2024	2025		2026
1	5	Tools & Equipment	\$8	-	-	-	-	-	-	-	-	-	-	
2	28	EV - Station Infrastructure	3,349	\$2,968	\$1,854	\$404	\$2,928	\$2,400	\$2,300	\$8,550	\$9,360	\$4,650	\$5,900	WP 2-15, 2-25
3	3M(b)	Install/Repl Var Bal Acct	-	1,802(a)	12,801(a)	31,038(a)	36,233	18,100	-	-	-	-	-	WP 2-16, 2-26
4		Grand Total	\$3,357	\$4,770	\$14,655	\$31,442	\$39,161	\$20,500	\$2,300	\$8,550	\$9,360	\$4,650	\$5,900	

(a) Line 3, 2017-2019 Recorded Adjusted values vary from the values listed in the Results of Operations (RO) Model due to errata. These amounts do not align to the RO Model provided to the Public Advocates Office at the time of filing. The RO will be updated to incorporate these errata with the Joint Comparison Exhibit submittal.

(b) Costs in MWC 3M are funded through balancing account capital and recovered through TEBA. Ongoing costs will enter rate base in 2023 and beyond.

(PG&E-6)

PACIFIC GAS AND ELECTRIC COMPANY 2023 GENERAL RATE CASE

Testimony: ☒ Workpapers: ☐ SOQ: ☐
 Exhibit Number: 6 Chapter Number: 2
 Chapter Title: Customer Engagement
 Witness Name: Jason Guenther

Page No.	Line No.	Item	As Filed	As Corrected
Errata as of November 5, 2021				
2-ii	Line 14	Program Name	1) Electric Vehicle Incentive Program	1) Electric Vehicle Infrastructure Program
2-3	Lines 21-24	Program Name	PG&E requests that the Commission adopt the following capital forecasts for infrastructure costs to support PG&E's Electric Vehicle Incentive Program (EVIP) and PG&E's internal fleet vehicle program:	PG&E requests that the Commission adopt the following capital forecasts for infrastructure costs to support PG&E's Electric Vehicle Infrastructure Program (EVIP) and PG&E's internal fleet vehicle program:
2-23	Line 22	Program Name	1) Electric Vehicle Incentive Program	1) Electric Vehicle Infrastructure Program
2-24	Lines 6-8	Commission Decision Reference	The Commission found that PG&E's Transportation and Aviation Services forecast was reasonable in Decision (D.) 20-12-015.	The Commission found that PG&E's Transportation and Aviation Services forecast was reasonable in Decision (D.) 20-12-005.
2-24	Footnote 62	Commission Decision Reference	D.20-12-015, Conclusion of Law 66.	D.20-12-005, Conclusion of Law 66.
2-32 to 2-33	Lines 28-31 Lines 1-2	California Distributed Generation Statistics Website Memorandum Account	PG&E expects \$224,630 to be booked to the CDGSWMA by the end of 2022 and is seeking recovery of that amount in this GRC along with closure of the memo account, consistent with Res.E 5030. A full reasonableness review and request for recovery for costs recorded is included as Attachment C of this chapter.	~~PG&E expects \$224,630 to be booked to the CDGSWMA by the end of 2022 and is seeking recovery of that amount in this GRC along with closure of the memo account once recorded balances through December 31, 2022 are recovered, consistent with Res.E 5030. A full reasonableness review and request for recovery for costs recorded is included as Attachment C of this chapter.~~

Page No.	Line No.	Item	As Filed	As Corrected
2-33	Line 1	Table 2-4 Overview of CET Cost Recovery Mechanisms	Electric Vehicle Charging Network (EVCN) Phase 1	Electric Vehicle Charge Network (EVCN) Phase 1 Program
2-33	Line 2	Table 2-4 Overview of CET Cost Recovery Mechanisms	Fleet Ready Program	EV Fleet Program
2-33	Line 5	Table 2-4 Overview of CET Cost Recovery Mechanisms	EVIP; GRC; GRC; GRC; GRC	Deleted Line 5
2-33	Line 6	Table 2-4 Overview of CET Cost Recovery Mechanisms	PG&E's Internal Fleet Program; GRC; GRC; GRC; GRC	Deleted Line 6
2-33	Lines 19-20	Program Name	Electric Vehicle Charge Network (EVCN) Program Recorded to the Charge Smart and Save Subaccount	EVCN Phase 1 Program (Recorded to the Charge Smart and Save Program Subaccount)
2-34	Lines 22-23	Program Name	Fast Charge Program Subaccount	Fast Charge Program (Recorded to the Fast Charge Program Subaccount)
2-35	Lines 1-3	Program Name	Schools Subaccount and Parks Subaccounts Recorded to the EV Charge Schools Subaccount and EV Charge Parks Subaccount respectively	EV Charge Parks and EV Charge Schools Pilot Programs (Recorded to the EV Charge Parks Subaccount and EV Charge Schools Subaccount)
2-37	Line 4	Table 2-6 2017 Recorded Adjusted Total	\$3,116	\$4,770
2-37	Line 4	Table 2-6 2018 Recorded Adjusted Total	\$14,177	\$14,655
2-37	Line 4	Table 2-6 2019 Recorded Adjusted Total	\$31,440	\$31,442

Page No.	Line No.	Item	As Filed	As Corrected
Errata as of February 28, 2022				
2-13	8-11 (As Filed)	Section B.b. PSPS Planning and Readiness	Costs for PG&E's PSPS Planning and Readiness activities were previously recorded outside of the GRC through PG&E's WMBA and FRMMA. Beginning in 2023, PG&E proposes to recover the forecasted costs through GRC revenues.	Sentence deleted.
2-30	28-29	Section F Balancing and Memorandum Accounts	1. Planning and Readiness Costs – Wildfire Mitigation Balancing Account (WMBA-E) and Fire Risk Mitigation Memorandum Account	1. Planning and Readiness Costs – Wildfire Mitigation Balancing Account (WMBA-E) and Wildfire Memoranda Accounts
2-31	N/A	Table 2-3 Title	OVERVIEW OF PSPS PLANNING AND READINESS COST RECOVERY MECHANISMS	OVERVIEW OF PSPS PLANNING AND READINESS COST TRACKING ACCOUNTS
2-31	N/A	Table 2-3 Header	Cost Recovery Mechanism	Cost Tracking Accounts
2-31	N/A	Table 2-3 Line 1 2023-2026 Column	GRC	WMBA-E

Page No.	Line No.	Item	As Filed	As Corrected
2-31	N/A	Table 2-3 Line 2 2020 Column	FRMMA	FRMMA ^(a) ^(a) In 2020, PG&E used the Fire Risk Mitigation Memorandum Account (FRMMA) for tracking purposes only, and is not seeking cost recovery of 2020 costs associated with our Customer Resiliency and Support Programs.
2-31	N/A	Table 2-3 Line 2 2021 Column	WMBA-E	WMPMA
2-31	N/A	Table 2-3 Line 2 2022 Column	WMBA-E	WMPMA
2-31	N/A	Table 2-3 Line 2 2023-2026 Column	GRC	WMBA-E
2-31	9-11	Section F.1.a. Wildfire Mitigation Balancing Account (WMBA-E)	Starting January 1, 2023, PG&E proposes to move expense costs associated with PSPS-related outreach and education, research, and customer insights to the GRC.	PG&E uses the WMBA to track costs associated with our PSPS related outreach and education, research, and customer insights to the GRC.
2-31	13-16	Section F.1.a. Wildfire Mitigation Balancing Account (WMBA-E)	N/A	PG&E proposes continued use of the two-way WMBA to record wildfire mitigation related activities, including those activities described in this application. ⁸⁹ ⁸⁹ See Exhibit (PG&E-4), Chapter 4.

2-31	17-21	Section F.1.b.	b. Fire Risk Mitigation Memorandum Account	b. Wildfire Memoranda Accounts
2-32	1-20	Wildfire Memoranda Accounts	The FRMMA was established pursuant to Senate Bill 901 (2018) (Public Utilities Code Section 8386 (j)), to record incremental costs of fire risk mitigation work that is not otherwise recovered in PG&E's adopted revenue requirements. Such costs shall include, but are not limited to, expense and capital expenditures for: advanced system hardening and resiliency; expanded automation and protection; improved wildfire detection; enhanced event response capacity, and vegetation management activities. Starting January 1, 2023, PG&E is proposing to move expense costs associated with its DDAR, Portable Battery Program and Generator Program to the GRC.⁸⁹ ⁸⁹ Exhibit (PG&E-6), WP 2-32, lines 12-14.	In addition to the WMBA, PG&E has established two memorandum accounts where certain wildfire related costs can be recorded – the Wildfire Mitigation Plan Memorandum Account (WMPMA) and the FRMMA. The purpose of the WMPMA is to record incremental costs incurred to implement an approved WMP that are not otherwise recovered in PG&E's adopted revenue requirements.⁹⁰ Such costs include expense and capital expenditures for wildfire risk mitigation activities outlined in PG&E's WMP, including enhanced inspection activities in excess of what was authorized in PG&E's existing GRC. Costs in the WMPMA are subject to reasonableness review. The purpose of the FRMMA is to record incremental costs of fire risk mitigation work that are not otherwise recovered in PG&E's adopted revenue requirements.⁹¹ Such costs include wildfire mitigation activities that were not contemplated as part of the prior GRCs or WMPs. Costs to be recovered through the FRMMA do not include costs approved for recovery in PG&E's GRCs or through other cost recovery mechanisms including WMPMA. Costs in the FRMMA are subject to reasonableness review. Starting January 1, 2023, PG&E is proposing to move expense costs associated with its Customer Resiliency and Support Programs (e.g., DDAR, Portable Battery Program and Generator Program) to the GRC and proposes to use the two-way WMBA to record these activities.⁹² ⁹⁰ D.19 05 037, p. 64, OP 21, authorized PG&E to open the WMPMA to track incremental wildfire-related costs incurred while implementing approved programs within the 2019 WMP. On June 5, 2019, PG&E submitted

Page No.	Line No.	Item	As Filed	As Corrected
				AL 5555-E to establish the WMPMA. The AL was approved by the Commission on August 8, 2019 with an effective date of June 5, 2019. ⁹¹ On November 1, 2018, PG&E submitted Advice Letter (AL) 5419-E to establish the FRMMA to track costs incurred for fire risk reduction that are not otherwise encompassed in the Company's revenue requirement. The Commission approved AL 5419-E on March 12, 2019, effective January 1, 2019. ⁹² Exhibit (PG&E 6), WP 2-32, lines 12-14.
2-34	N/A	Table 2-4 Title	OVERVIEW OF CET COST RECOVERY MECHANISMS	OVERVIEW OF CET COST TRACKING ACCOUNTS
2-34	N/A	Table 2-4 Header	COST RECOVERY MECHANISM	COST TRACKING ACCOUNTS

PACIFIC GAS AND ELECTRIC COMPANY
CHAPTER 2
ATTACHMENT A
MEMORANDUM OF UNDERSTANDING BETWEEN
SMALL BUSINESS UTILITY ADVOCATES AND
PACIFIC GAS AND ELECTRIC COMPANY ON
SMALL BUSINESS CUSTOMER ENGAGEMENT

**MEMORANDUM OF UNDERSTANDING
BETWEEN
SMALL BUSINESS UTILITY ADVOCATES
AND
PACIFIC GAS AND ELECTRIC COMPANY
ON
SMALL BUSINESS CUSTOMER ENGAGEMENT**

Small Business Utility Advocates (SBUA) and Pacific Gas and Electric Company (PG&E or the Company) (collectively, the Parties) hereby enter into this Memorandum of Understanding (MOU) pertaining to the revenue requirement phase of PG&E's upcoming test year 2023 General Rate Case (GRC).

**ARTICLE 1
RECITALS**

1.1 In 2021, PG&E will file its 2023 GRC application, which will address electric distribution, gas distribution, transmission and storage, and electric generation rates for the years 2023 through 2026.

1.2 SBUA is a non-profit organization whose mission and corporate purpose includes representing the interests of Small Business customers in California. Promoting equitable and fair revenue allocations that facilitate the success of small commercial customers is a high priority for SBUA. SBUA intends to participate as an intervenor in PG&E's 2023 GRC.

1.3 PG&E provides electricity and gas service to much of Northern California. PG&E provides a number of services and support for Small Business customers through its Small and Medium Business (SMB) class of programs.

1.4 In PG&E's 2020 GRC proceeding, SBUA and PG&E entered into a MOU (2020 GRC MOU) that was approved by the California Public Utilities Commission (CPUC or Commission) in Decision (D.) 20-12-005.

1.5 Pursuant to the 2020 GRC MOU, SBUA and PG&E have met semi-annually to discuss implementation of that MOU.

1.6 As part of the SBUA and PG&E collaborations under the 2020 GRC MOU, PG&E has funded and implemented a number of successful programs that benefit Small Businesses. A summary of the SMB program, which includes an annual budget spending target and actual costs by broken down by initiative for fiscal year 2020, is attached as Exhibit 1.

1.7 As an outgrowth of the semi-annual meetings, SBUA and PG&E commenced discussions and good faith negotiations of matters of common interest for the years 2023 to 2026. These discussions led to the current MOU.

1.8 The Parties wish to continue collaborating to advance the interests of Small Businesses in PG&E's service territory. The Parties agree that PG&E will provide the services and support to Small Business customers described in this MOU primarily through PG&E's SMB programs. References in this MOU to Small Businesses by necessity may entail services that PG&E provides to the SMB customer class as a whole, but which directly benefit Small Business customers.

ARTICLE 2

OUTREACH AND SUPPORT

2.1 Spending Target

The Parties agree that PG&E will direct the equivalent of \$6.5 million annually, or a total of \$26 million, during the 2023 GRC Period, from the budgets of its Customer Care and other departments that support Small Business customers, to provide outreach and support for PG&E's Small Business customers. The Parties agree that the spending commitment in this Section 2.1 is exclusive of the overhead costs,¹ which provide additional financial support for the programs that benefit Small Business customers. The Parties agree that PG&E will direct the funding in this Section 2.1 toward Small Business outreach as follows:

¹ The majority of PG&E's overhead costs are not allocated to the expense orders and instead are budgeted and recorded through separate line items.

2.1.1 Overall Outreach

PG&E will spend funds on support for Small Business, outreach and engagement for Small Business customers through digital and other communication channels, and as otherwise may be appropriate, to support the needs of Small Business customers. Among other things, this may include:

- (1) marketing small business programs and energy solutions by PG&E to Small Business customers;
- (2) providing explanations of billing changes (including charges for time-of-use and demand response options);
- (3) providing updates on the optimal rate schedules for particular Small Business customers;
- (4) answering Small Business customer questions;
- (5) engaging Small Business customers through participation in local community organizations and events;
- (6) providing education and assistance for small businesses seeking to provide materials and services to PG&E;
- (7) studying and reporting on Small Business adopting of distributed energy resources;
- (8) serving as a source of information for small businesses with concerns regarding high heat emergencies, increased energy use, and higher energy bills; and
- (9) exploring opportunities to better support the needs of Small Businesses in Environmental and Social Justice (ESJ) communities, including as they relate to PG&E's energy programs and the Commission's ESJ Action Plan.²

The Parties agree that it is a priority for the 2023 GRC period to perform Small Business outreach, including partnering with small business organizations to conduct outreach in ESJ communities.

² See California Public Utilities Commission (CPUC) Environmental and Social Justice Action Plan, version 1 February 2019. This Action Plan uses "ESJ communities" to refer to its broader efforts and uses "disadvantaged communities" or "DACs" as terms specifically defined in statute and CPUC decisions.

2.1.2 Small Business Organization

Based on prior agreements and negotiations between the parties, PG&E created a Small Business organization with dedicated account managers to connect Small Business customers to PG&E tools, resources, programs, services, and integrated demand-side management offerings. PG&E designated a leader of that organization responsible for coordinating and shaping Company-wide interactions and policies to improve services for Small Business customers and to act as a liaison for coordination with SBUA and other interested parties on Small Business issues. The Parties agree that PG&E will continue to spend funds to support this organization during the 2023 GRC Period.

2.1.3 Small Business Adopters of New Energy Technologies

Pursuant to Section 2.1.3 of the 2020 GRC Settlement Agreement, the Parties agreed that PG&E would explore with SBUA and other interested parties opportunities to promote adoption by Small Businesses of new energy technologies such as electric vehicle charging, energy storage, and solar/distributed generation.

The Parties agreed that PG&E would examine and submit high-level testimony in PG&E's 2023 GRC Phase 1 a study that; (1) measured the existing adoption rates by Small Business of Distributed Energy Resources (DER) and evaluated the need to increase marketing, education, and outreach to Small Businesses to increase their adoption of DER; and (2) examined the potential need for dedicated funding in the GRC Phase 1 to assist Small Business to increase their adoption of DER. The Parties agreed that the scope of the study would be jointly determined by agreement between PG&E and SBUA and funded as part of PG&E's otherwise existing annual spending requirement. For purposes of that section, DER was defined to include distribution—connected generation resources, energy efficiency, energy storage, electric vehicles, and demand response technologies.

Due primarily to the timing of approval of PG&E's 2020 GRC and the disruptive impacts of the COVID pandemic, the process for conferring, scoping and completing the study could not be completed within the timeframe contemplated in the 2020 GRC Settlement Agreement and thereafter submitted as part of PG&E's 2023 GRC Phase 1 testimony. Accordingly, the Parties hereby mutually agree that the deadline for

completing the study identified in the 2020 GRC Settlement Agreement shall be fulfilled by PG&E's completion of the study by July 1, 2022.

PG&E will electronically serve the completed study on the service lists for the 2020 and 2023 GRCs.

2.1.4 Small Business Participation in Self Generation Incentive Program

The Settling Parties acknowledge that the Self Generation Incentive Program ("SGIP") is a statewide program that cannot be unilaterally altered in this utility-specific proceeding. The Parties agree to meet and confer during meetings regarding PG&E's efforts to promote distributed energy resources among Small Businesses located in disadvantaged and low-income communities that meet the eligibility requirements to participate as part of the SGIP Equity Budget defined by the Commission in D.17-10-004.

2.1.5 Webpage and Technology Resources

2.1.5.1 Dedicated Webpage for Small Businesses

Based on prior agreements and negotiations between the parties, PG&E created a new webpage specifically dedicated for Small Businesses (the "Small Business Webpage"). The Parties agree that PG&E is permitted to spend outreach funds for improvements to this webpage on an ongoing basis as appropriate. The Parties also agree that SBUA will provide PG&E with feedback on the SMB website at the ongoing meetings described in Section 7.1 of this MOU.

2.1.5.2 Improved Communications with Small Businesses

Based on prior agreements and negotiations between the parties, PG&E has built additional functionality in its "Your Account" (previously called My Energy) portal to allow Small Business and other commercial customers to indicate their preferred communication method for account notifications. The Parties agree that PG&E is permitted to spend outreach funds to maintain and improve on this functionality for the 2023 GRC Period as necessary.

2.1.5.3 Additional Links and Resources

Consistent with the 2020 GRC MOU, the Parties agree that PG&E will continue to provide links on the Small Business Webpage to training materials and other resources to educate Small Businesses. Subject to the agreement of both parties, these links and resources will include information about PG&E's programs and Small Business participation in:

- a. distributed energy resources (*i.e.*, energy efficiency, distributed generation resources, energy storage, electric vehicles, microgrids, and demand-side management programs);
- b. energy audits;
- c. contracting opportunities with PG&E;
- d. environmental sustainability;
- e. a list of dates and locations of upcoming Small Business conferences and programs by PG&E;
- f. resources related to Economic Development;
- g. small business electricity rate information including Time of Use, Peak Day Pricing, and Solar Choice;
- h. electric vehicle charge network information for Small Businesses;
- i. resources for extreme heat events with tips and solutions, as well as answers to frequently asked questions on high heat events; and
- j. public power safety shutoffs.

ARTICLE 3

ENVIRONMENTAL AND SOCIAL JUSTICE COMMUNITIES

3.1 As part of the negotiations leading to this MOU, SBUA and PG&E conferred regarding the Commission's Environmental and Social Justice Action Plan (Version 1.0, dated February 21, 2019) and the need to support Small Businesses located in ESJ communities.

3.2 The Parties agree that PG&E shall conduct a high-level study on small businesses in ESJ communities to develop all the information necessary to:

- Determine the number and type of Small Business customers located in ESJ Communities of PG&E's service territory;
- Disaggregate the number and type of Small Business customers located in Native American ESJ Communities; and
- Determine how best PG&E can further the goals set forth in the Commission's ESJ Action Plan with support for Small Business customers in ESJ communities.

The parties will initiate conversations on the nature and scope of such study prior to the 2023 GRC cycle. The parties anticipate these conversations may consider how to help Small Businesses in ESJ communities by increasing investment in clean energy resources, advancing PG&E's clean energy programs, increasing climate resiliency, promoting economic and workforce development opportunities, and enhancing participation in Commission proceedings for these customers. PG&E agrees to complete the high-level study and report by December 31, 2023. The study will be funded out of the spending target identified in Section 2.1.

PG&E will serve the completed study and report to the service list.

3.3 PG&E will host at least one annual workshop each calendar year during the 2023 GRC period to promote outreach and education to Small Businesses in ESJ Communities about PG&E's energy programs and PG&E's other efforts to advance the Commission's ESJ Action Plan. PG&E will take reasonable efforts to identify and invite Small Businesses in ESJ communities, as well as SBUA and other interested parties, to attend this workshop. These activities will be funded out of the spending target identified in Section 2.1.

ARTICLE 4

ECONOMIC DEVELOPMENT

4.1 Based on prior agreements and negotiations between the parties, PG&E created a new Economic Development (ED) organization to run the ED Program. The Parties agree that PG&E will request \$.736 million annually in its 2023 GRC application to support the organization's ED efforts during the 2023 GRC Period.

4.2 Part of the ED organization's focus will be on supporting Small Businesses. The Parties agree that the ED organization, as funding is approved by the Commission in the 2023 GRC proceeding , will provide the following services to Small Businesses: estimating costs and responding to customer inquiries associated with new utility services; determining the service reliability and delivery options within a desired area; and presenting other authorized PG&E Demand-Side Management incentives that will help lower the cost of expanding, relocating, or continuing a business within PG&E's service area.

ARTICLE 5

TRACKING SYSTEMS FOR SMALL BUSINESSES

5.1 PG&E currently identifies customer classes using energy usage criteria. The Parties agree that PG&E will continue to identify those customers in the appropriate customer databases for the purpose of alerting Customer Service Representatives of products and services that may benefit Small Businesses. The Parties agree that PG&E will maintain or improve its tracking system as necessary. The Parties further agree to meet and confer to determine if PG&E's identification and tracking process can be improved upon to better serve the needs of Small Business customers, including; (1) how best to identify Small Business customers within the SMB customer sector; and (2) whether a Small Business customer self-identification option should be included.

ARTICLE 6

CONTRACTING OPPORTUNITIES FOR SMALL BUSINESSES

6.1 Supply Chain

6.1.1 Small suppliers and PG&E safety culture

PG&E agrees to explore and provide a report to SBUA and the Commission by the next General Rate Case about specific initiatives PG&E will be undertaking to support its use of small business suppliers, as defined by the California Department of General Services, as follows:

1.) Recognize employees who have successfully integrated new small businesses into the PG&E supply chain.

2.) Help small businesses navigate the bidding process and address barriers to entry that prevent small businesses from competing effectively.

6.2 Contracts with Small Businesses

PG&E agrees to dedicate a section of testimony in the 2023 GRC to its continued work supporting the small business community as a whole. As part of this testimony, PG&E will include its best estimate of the dollar amount of direct contract spend by PG&E to businesses who qualify as small businesses as defined by the California Department of General Services.

6.3 Trade Professional Alliance Co-Marketing Program

In one of the meetings discussed in Section 7.1 of this MOU, PG&E will provide SBUA with an overview of the TradePro Program's benefits to Small Businesses. PG&E agrees to continue to implement the TradePro Program in a manner that supports Small Business participation.

ARTICLE 7 SETTLEMENT IMPLEMENTATION

7.1 Ongoing Meetings

The Parties agree to meet at least annually during the 2023 GRC Period to discuss matters pertaining to the implementation of this MOU.

7.2 Annual Report

The Parties agree that PG&E shall provide a report that details annual expenditures and progress on the small business programs covered by this agreement and provide an annual report of the progress of the program for viewing only by SBUA and PG&E, and any other entities PG&E allows in its sole discretion. As part of this report, PG&E will acknowledge feedback received from SBUA and explain the extent to which such feedback was incorporated into process of planning and managing its programs and initiatives. In addition, as part of this report, PG&E will provide financial information substantially similar to and modeled on the program and budget report previously provided to SBUA, as provided in Exhibit 2, which includes: (1) the previous year's

spend as allocated by programs and work contemplated by this agreement; and (2) a proposed spending target for the next year and work contemplated by this agreement.

7.3 Changing Technology Landscape

Among other things, this MOU reflects the Parties' understanding that the development and implementation of digital strategies and resources plays an important role in supporting Small Business customers. The Parties acknowledge that technology and digital tools change at a rapid pace and in ways that cannot always be predicted. The Parties agree that as technology continues to evolve, PG&E must have the flexibility to evaluate the appropriate level and type of technology support for Small Business customers in light of other available service options. Should a material change to the approach outlined in this agreement become warranted on that basis, PG&E will consult with SBUA through the collaborative ongoing meetings process and work toward a collaborative resolution.

ARTICLE 8 DEFINITIONS, TERM AND GENERAL PROVISIONS

8.1 Definitions

8.1.1 The term "Small Businesses" refers to those businesses on a PG&E commercial rate that (1) are certified or qualify as Small Businesses under the California Department of General Services; (2) are defined as Small Businesses by the CPUC; or (3) self-identify in good faith to PG&E as Small Businesses.

8.1.2 The term "Small and Medium Business" customers refers to commercial customers that use less than 500,000 kilowatt-hour annually.

8.1.3 The term "2023 GRC Period" refers to the years 2023 through 2026.

8.1.4 The term "Small Business Webpage" has the meaning set forth in Section 2.1.5.1 of this MOU.

8.2 Term

This MOU is conditioned on Commission approval. The term of this MOU (i) commences on January 1, 2023, or the date this agreement is approved by the Commission, whichever is later, and (ii) terminates four years after its commencement

date or when the Commission issues a final decision in PG&E's subsequent GRC, whichever is earlier.

8.3 General Provisions

8.3.1 The Parties agree that this MOU addresses all issues between the Parties in the revenue requirement phase of PG&E's 2023 GRC. SBUA intends to participate in PG&E's 2023 GRC by submitting testimony, participating in settlement discussions, evidentiary proceedings or otherwise, consistent with the terms of this MOU. The Parties acknowledge that SBUA may participate in global settlement negotiations with other parties to promote the adoption of, and in a manner that is consistent with, this MOU.

8.3.2 The Parties agree that this MOU is non-precedential.

8.3.3 The Parties shall jointly request Commission approval of this MOU and shall actively support its approval. The Parties agree that this MOU is reasonable, consistent with law, and in the public interest, and therefore should be adopted without modification.

8.3.5 This MOU represents the entire understanding of the Parties with respect to the matters described herein, and, except as described herein, supersedes and cancels any and all prior oral or written agreements, principles, negotiations, statements, representations, or understandings among the Parties pertaining to these matters.

8.3.6 This MOU may be amended or changed only by a written agreement signed by the Parties.

8.3.7 This MOU may be executed in counterparts, and by facsimile or pdf signature, each of which shall be deemed an original, but all of which together shall constitute one and the same instrument. A facsimile or pdf signature shall be as valid as the original.

8.3.8 The Parties intend the MOU to be interpreted and treated as a unified, integrated agreement. In the event the Commission rejects or modifies the terms or funding of the MOU, the Parties reserve all rights to renegotiate this MOU as set forth in Rule 12.4 of the Commission's Rules of Practice and Procedure.

In Witness Whereof, intending to be legally bound, the undersigned have duly executed this Memorandum of Understanding on behalf of the parties they represent.

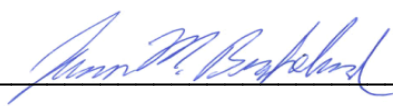
SMALL BUSINESS UTILITY ADVOCATES By:  Date: <u>June 18, 2021</u>	PACIFIC GAS AND ELECTRIC COMPANY By:  Date: <u>June 18, 2021</u>

EXHIBIT 1

Financial Commitment Update

Financial commitment outlined here pertains to Outreach, Support & Digital activities described in Article 2 and Article 6 of the MOU. This financial report pertains to section 2.1.5 of the MOU

SBUA Settlement	2020 EOY Spend	2021 Forecast Spend	2021 YTD Spend
Total (in Millions)	\$6.978	\$6.625	\$1.524

2020 Total - High Level Breakdown

Customer Outreach, Service, & Strategy - \$3.859M

- SMB START Onboarding/Milestone Team
- SBE Team Outreach and service work
- Affinity Partners & Community Outreach
- Express Connections
- PSPS Event work
- SMB General

SMB Marketing - \$820k

- Digital Resources Marketing
- Here for Business
- Welcome Series
- Newsletter

Digital Resources - \$985k

- FirstAdvisor Suite
- Uplight (FirstAdvisor) Enhancements

Customer Insights & Research - \$675k

- Business Advisory Forum
- Customer Insights PMS

Rates & Billing- \$638k

- TOU Transition
- PDP Maintenance

2021 YTD Spend Reported on 5/4/2021. Total of
High Level Breakdown may not exactly equal
2020 EOY Spend due to rounding.

(PG&E-6)

EXHIBIT 2

SBUA & PG&E Bi-Annual Meeting



2020 GRC Settlement Implementation

May 17th, 2021

Remote Workplace



- ☐ **Earthquake:** Know the safest places to duck, cover, and hold, such as under sturdy desks and tables



- ☐ **Fire:** Know your exits, escape routes, and evacuation plan. If safe to do so, use your [compliant fire extinguisher](#). Exit the house, and call 911



- ☐ **Active Shooter:** Get out, hide out, take out, and call 911



- ☐ **Prevent the Spread of COVID:**
 - ☐ Wear a face mask
 - ☐ Stay 6 ft apart
 - ☐ Wash your hands often – Clean your hands often, either with soap and water for 20 seconds or a hand sanitizer that contains at least 60% alcohol
 - ☐ Use the LiveSafe App

NEW



- ☐ **Psychological Safety:**
 - ☐ I'm cared for
 - ☐ People have my back and I have theirs
 - ☐ It's safe to take risks
 - ☐ New ideas are welcome
 - ☐ I practice self-care
 - ☐ Be kind to yourself and others

NEW



- ☐ **Ergonomics:**
 - ☐ Practice **30/30** (every 30 minutes, move/stretch for 30 seconds)
 - ☐ Ensure [proper ergonomics](#)
 - ☐ Use and update RSI Guard



- ☐ **Emergency Planning:**
 - ☐ Update [emergency contacts](#) via [PG&E@Work for Me](#)
 - ☐ Create/update a [personal emergency preparedness plan](#)

NEW



- ☐ **Medical Emergency:** Know who can perform first aid/CPR. Call 911 if you're alone or share your location with the leader of the call to send help. If you have an AED, ensure you and others in your household know where it's located and how to use it.

Resources:

- ☐ **Corporate Security:** 800-691-0410
- ☐ **Nurse Care Line:** 888-449-7787;
- ☐ **Employee Assistance Program (EAP):** Reach Out. Get Help. Feel Better. 888-445-4436
- ☐ [Speak Up Now page](#)

PG&E is enhancing our focus on serving our Small Business customers

In PG&E's 2020 GRC, SBUA and PG&E entered into a settlement agreement in which the parties agreed to meet semi-annually to discuss issues related to settlement implementation. (Settlement, Section 6.1)

• Overview and Agenda

- SMB Outreach and Education
- SMB Customer Insights and Marketing
- Digital Tools
- SGIP Update
- Financial Update
- PSPS Update
- Economic Development
- Trade Professional Network
- Supply Chain Responsibility
- DER Study and Report



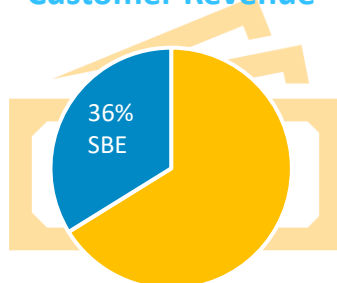
2021 Meeting Dates:

- May 17th, 2021
- TBD

Rebuild, Recover, Reconnect

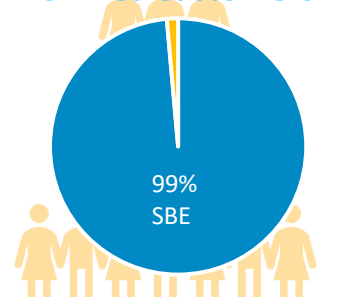
26 Full Time Employees | **137** Years of Employee Experience

Non Residential Customer Revenue



■ \$5.81B LEA ■ \$2.97B SMB

Non-Res Customers



■ 318,487 SMB ■ 4556 LEA

START Team

9 members strong
Phone-based customer outreach for:
-New business onboarding
-Rate education
-Creative pilot efforts



KPIs:
Customer educations
Customer satisfaction

Small Business Advisors

14 members strong
-Phone-based outreach to unassigned customers.
-Liaison for all customer service and sales needs



KPIs:
Energy saved (KW, KWh, Therms)
Customer engagement and satisfaction
Beyond the Meter projects

Channel Strategy

Leads strategic initiatives, forges new relationships for SBE Organization



KPIs:
Customer outreach and education
Segment and sector leadership
New internal and external Partners

Digital Strategy

Lead and collaborate digital solutions for SBE customers.



KPIs:
New digital tools and resources focused on improving customer experience and ease of use

2021 Key Accomplishments:

722 KW – 41%
4.807 MkwH – 36%
467K Therms –66%
\$1.4 Million Incentives
7,138 customer Interactions
54 Resolved Service Cases
83%+ Welcome Series
95% Customer Satisfaction
245 Opportunities Passed
5 Virtual Community Events

2021 SBE Themes

1. Invest in our people
2. Advocate for our customers
3. Be strategic partners both internally and externally

Focus Areas

1. Customer engagement through outreach and education
2. Energy efficiency and On Bill Financing solutions
3. Beyond-the-Meter solutions
4. Customer outage and emergency preparedness
5. Gaining insights to improve customer satisfaction

2020 Initiatives

1. START 6-month and 1-year calls w/ surveys
2. Safety and power resiliency outreach
3. Generator Rebate Outreach and TOU Education
4. Enhancing digital tools to benefit SMB sector
5. Business to business outreach through our Affinity partners

2021 Initiatives

1. Finalize our SBUA MOU for 2023-2026 GRC Cycle
2. Support customers through COVID recovery
3. Expand CBO and Affinity Partnerships
4. Business Resiliency: Provide Internal & External Resources
5. Enhance Digital solutions based on feedback
6. Provide Emergency Preparedness Education to CC Customers

New team Deepening our focus on small business success (Est. Aug 2020)

- 500 customers identified with 99% outreaches attempted

Customers



- 285 small agricultural customers fully educated on rate options

Rate
Educations



- \$951,000 in small biz rate savings realized

Impacts



2020 Accomplishments

2020 Energy Efficiency Savings*

- 4.1 Megawatts (107% of goal)
- 1.8 Million Gas Therms (538% of goal)
- 26.9 Megawatt Hours (111% of goal)
- \$9.4 Million in incentives

*Energy Efficiency efforts are not funded by SBUA program dollars, but by the EE ABAL. Small Business customer benefit is incidental

Focus for 2021

Public Safety

Unassigned critical customers in high fire threat areas will be proactively outreached to
Around 1300 SMB customers over 4 weeks

Energy Efficiency

Goal 1751 KW, 13,503,875 kWh, and 709,200 Therms
2nd highest accomplished percentage in Business Energy Solutions at 28% KW, 28% kWh, and 63% Therms

Special Outreaches already completed in 2021

Energy Efficiency Campaign, Agriculture Time of Use Benefiter/COVID19 Support, K12 Proposition 841, DC Meter replacement, Uncashed checks, Small refrigeration, Ultra low temp freezer (vaccine storage)

Upcoming Outreaches

BEST rate outreach
Backup generation outreach campaign

2-AtchA-19



Looking back at 2020

Completed

- Welcome Series Proactive Outreach: **13,414 Customers**
- PSPS Proactive Outreach: **2000 Customers**
- Customer Satisfaction Survey: **94 Surveys, 96% CSAT**
- Wildfire Re-build Support: Proactive outreach to **182 Business Customers**
(completed January 2021)
- Economic Development Rate Education: **96 Customers**
- Flat to TOU Outreach: Proactive outreach to **1274 customers**
(completed January 2021)

What else did START do to support SMB Customers?

- EV Fleet: **35 Customers**
- Vulnerable Business Outreach at onset of COVID: **110 Customers**
- Kincaid Fire Support: **145 Customers**
- **2** Virtual Workshops to support SMB Customers: Spanish/English
- **Educate on internal/external resources such as SBA Grants/loans, Governor's office resources, Local Grants**

COVID-19 Update

Due to shelter in place, entire team worked remotely in 2020 supporting SMB customers



START Team

PG&E's 2020
Diversity & Inclusion
Champion



A Glimpse at 2021

What are our customers saying?

“Just to talk to a live agent like the one I talked who was very polite and helpful”

“Having a direct and easy point of contact. Being a business owner leaves absolutely no time for phone trees and extended hold times.”

“I really appreciate that Terentius reached out to me personally and that I have his contact info if I need it in the future. There is so little personal interfacing and I love that PG&E provides this level of reaching out!”

“The dude that helped me did an amazing job I don't need anything else! Thank you, guys!”

In Progress

- Welcome Series Outreach on the rise: YTD- **3672** New 6 Week Customers, plus **2453**: 6 Month & 1 Year customer follow ups
- Continuing Economic Development Rate Education- YTD **200 Customers, 9 Hot Leads YTD**: to Robert Flores
- CBO Outreach- Connecting with our local chambers to provide support/resources, **16 assigned CBO for START Team** (2 per rep)

What's Next?

- PSPS Proactive Outreach- Tentative: April/May 2021
- Best Rate Education- Tentative: Quarter 3

Resources

- START Team proactively educating customers on California Capitol Solutions
- Continuing to provide internal/external resources such as SBA Grants/loans, Governor's office resources, Local Grants

CSAT Survey

- 98% CSAT Score YTD
- 53 Surveys YTD

Focused Outreach with 40 CBOs

Topic Highlights:

- Safety
- Restaurant Fund (Charitable giving)
- Payment Arrangements
- Wildfire Mitigation and Public Safety Power Shutoff (PSPS)
- SMB Vendor Diversity
- Online Account Set-up and Energy Savings Tools
- Energy Efficiency Resources
- Economic Development Rate
- Rate Analysis & Options

Safety Resources

For additional safety and emergency preparedness resources, visit PG&E's Safety Action Center pge.com/safetyactioncenter

Preparing Your Business for a Public Safety Power Shutoff

Be on alert for scams.
We take your personal and online security very seriously. If you ever doubt the validity of an email, call, text or visit from PG&E, call us immediately at 1-800-743-5000.

Update your contact information to receive alerts via text, email and phone pge.com/alerts

Wildfire Mitigation and Public Safety Power Shutoff (PSPS)

Reminder: Set-up alert notifications so we can reach you during a PSPS event. pge.com/alerts

See more about Public Safety Power Shutoffs. Watch and learn

For additional details on PSPS, visit pge.com/paps

PSPS overview

Smart Weather Forecast → **PSPS Outage Watch (INFORM LINEUP)** → **PSPS Outage Warning (OUTSIDE RESPONSE)** → **Power Shutoff** → **Updates and Inspections** → **Power Restored**

SMB Vendor Diversity

To meet the challenges of an evolving industry, diverse suppliers remain a key priority in our mission to deliver safe, reliable, affordable clean energy to our customers and communities.

Find out what it takes to do business with PG&E and learn about the small and diverse business certification process. To get started, complete a prospective supplier profile.

Learn more about PG&E's Supplier Diversity Program, benefits and resources. pge.com/supplierdiversity

Your Online Account: Register and sign in

Save money and improve operations with your online account

Gain access to:

- Customized energy savings plan
- Tools to stay informed about energy use
- Tips on energy management
- Incentives for equipment upgrades

Go to pge.com homepage and click Register

Set up your online account profile in a few easy steps. Watch and learn

Your Online Account: Cost and Usage Tool

Track Cost and Usage by time of day, day of the week or week by week.

View your usage patterns and see how changes in your operating schedule and shifts in weather can impact energy costs over time. pge.com/costandusage

See the impact of your rate plan combined with several other factors, such as daylight savings, maximum demand, the temperature and more.

Energy Efficiency Resources

Upgrade your equipment and improve operations at your business.

Here to help you
We are happy to walk you through how you can take advantage of these resources for your upcoming energy efficiency project.

Let's set up some time to talk. Business Customer Service Center 1-800-458-4743 smallbusinessresources@pge.com

Direct Install Program
Work with our contracted energy efficiency installation partners and take advantage of custom solutions, cost-savings and post-installation support.

Staples Energy: staplesenergy.com
Ecology Action: ecologyaction.org

Rebates
Find rebates on the energy-efficient equipment—quickly. pge.com/businessrebates

Project Starter Checklist
Kick off your project with this 6-step planning guide to realize maximum money and energy savings. pge.com/checklist

Energy Efficiency Financing
Upgrade to energy-efficient equipment with 0% interest financing. No out of pocket costs. Savings from energy efficiency can pay your monthly loan installments. pge.com/efc

Additional Business Resources

Economic Development Rate (EDR)

- PG&E's reduced electric rates help business customers stay afloat and maintain jobs in California.
- Lower costs through one of three reduced electric rate plan options.
- Rates are discounted at 12%, 18% or 25% on most of your electric costs for five years.

For more information on our Economic Development Rate, visit pge.com/economicdevelopment

Free Online Courses—Energy Education
Gain new skills and fuel your future with online courses and a robust learning library, all at no cost.

Enroll today at pge.doeebas.com/learn

State of California Resources
California and the federal government are providing assistance programs and employer resources to help small businesses recover and reopen safely.

For more information, visit covid19.ca.gov/business-and-employers

Helping Our Small Business Customers Rebuild and Recover

California Capital: Non profit financial institution focused on capacity building programs through business training, education, resources, one-on-one counseling, and access to capital for entrepreneurs. Completed two public workshops in Q1 to guide small businesses on state and federal grant and loan programs.

Artemia: Series of four Small Business Success virtual workshops with the goal to educate customers on current market conditions, covid recovery financial assistance programs, and PGE presentation on Economic Development and other offerings for small businesses

Presidio: Concierge assistance of 50 small business owners through the steps of installing EV infrastructure including grants, permitting, and vendor screening. Customer acquisition focused in DAC and Non DAC communities. Project due to be completed June 2021.

San Joaquin Valley Clean Energy Organization: outreach educating customers on PG&E's online resource platform for small business customers and increase small business awareness of specific PG&E program opportunities, including: SGIP (Self Generation Incentive Program), Electric Vehicle Rates, Backup Batteries, Backup Ag Well Generator Program and other Resiliency education.

Recent Projects

Optimizing the 2021 ‘Here for Business’ Marketing Campaign to encourage, inform, and support SMBs amidst the evolving climate of the COVID-19 world:

SMBs sense **improvements** around how PG&E is talking to its customers.

Above all else, SMBs are interested in saving money and learning about energy efficiency programs and incentives to help reduce their bills.

Customers are drawn to the campaign’s empathetic tone; however, some have a hard time believing PG&E truly cares about smaller businesses. SMBs would need to identify with the businesses shown in the ads for the concept to feel relatable.

Given the financial struggles many SMBs still face, communications around costly energy-efficiency upgrades that require significant investment feel irrelevant at this time.

Identifying ways PG&E can better support SMB customers who are struggling financially and may be behind on utility payments:

SMBs prioritize paying utilities, rent, and property taxes – cutting as many other expenses as possible.

Some SMBs received PPP loans any others have tried negotiating directly with vendors to lower bills and create flexible payment plans. SMBs had limited awareness of PG&E’s offerings.

SMBs are drawn to organizations that show they are willing to work with them and go the extra mile to ensure their satisfaction.

SMBs want to be rewarded, or acknowledged, for their loyalty to PG&E, even if they have no choice in their provider.

Recent Projects

Understanding the effects of COVID-19 on SMB customers' Public Safety Power Shutoff (PSPS) plans and experiences:

SMBs feel their customers are more understanding of PSPS-related business changes as a result of the pandemic, which in some ways eases the burden on customer service-related stresses: ***“The pandemic put the PSPS severity in the right perspective.”***

2020 was a particularly tough year for SMBs with government restrictions and other shutdowns, making it even more important to stay open whenever possible. PSPS communications including an accurate Estimated Time of Restoration (ETOR) are critical for SMBs for planning, and to combat the loss of inventory or find alternate ways to operate.

Many SMBs have arranged, or are in the process of arranging, alternate power to operate during PSPS events. Those engaging in remote work due to COVID-19 understand outages affect their workforce differently than before.

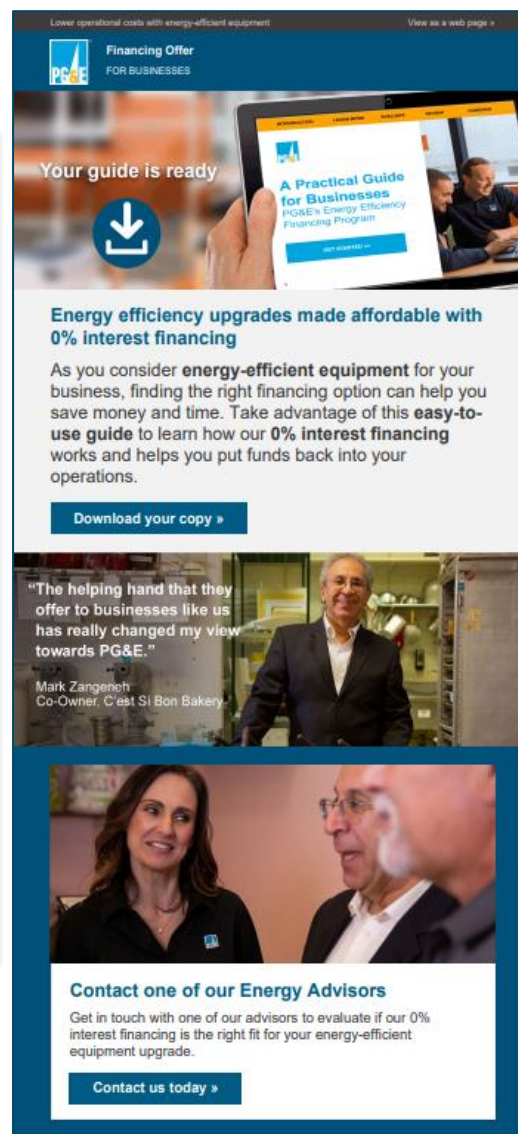
Understanding customer needs when it comes to PSPS notifications and communications:

When communicating about Public Safety Power Shutoffs, customers discourage the use of acronyms, as they contribute to confusion across many communications.

SMBs want PSPS notifications to be clear and concise; in that moment, customers simply want to know if they should expect to be shut off or not and, if they are shut off – when power will be restored.

When sharing any updates on improvements PG&E has made, it is important for PG&E to avoid sounding like ‘patting themselves on the back’ and instead be accountable for the disruptions customers have faced.

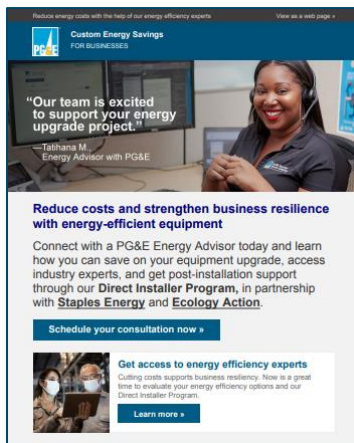
Customers want to see a road map of where the future of PSPS is going and PG&E’s long-term plans so they can plan accordingly.



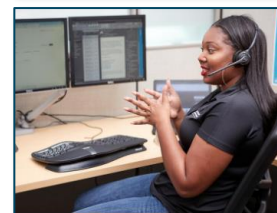
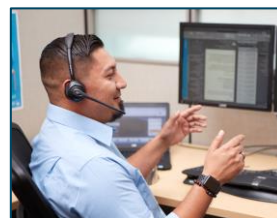
Monthly email series, spotlighting a key topic mentioned in that month's digital newsletter

- Small business are interested in resources to help manage energy bills and information on financial assistance.
- Resiliency topics cover financial stability, energy efficiency, safety, and operational excellence topics throughout the year.
- Average open rate for these emails is at 32.56% and click rate is at 2.65%. (Both high rates considering industry standards. 23.57% open rate and 1.27% click through rate.*)

*SMB Email Performance Metrics, Accelerating Digital Customer Relationships 2021 Utility Benchmarks Report, Questline



Email campaign



Personal outreach

Promoting personalized support to reduce energy costs, support business resilience for small businesses

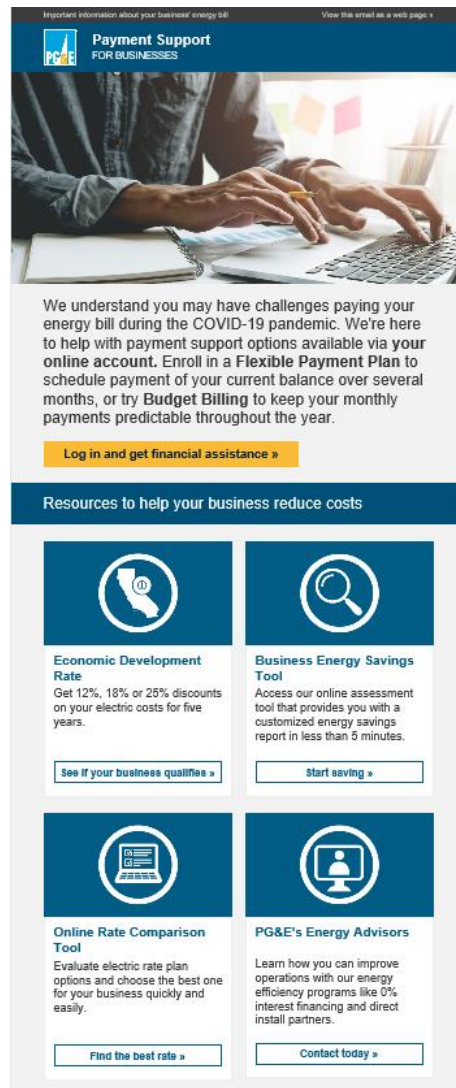
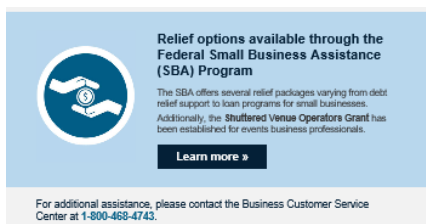
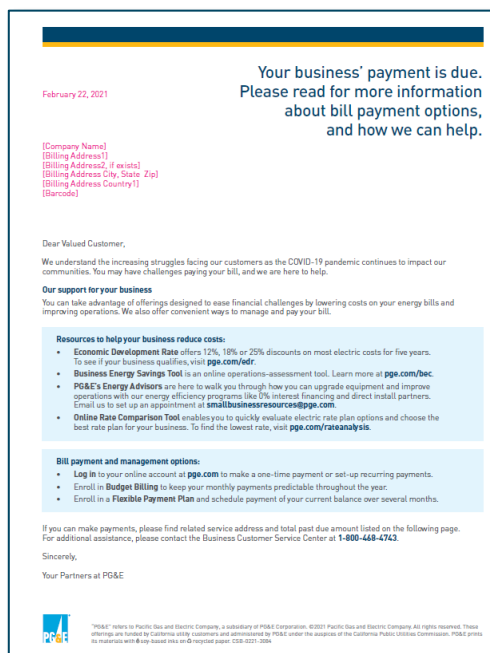
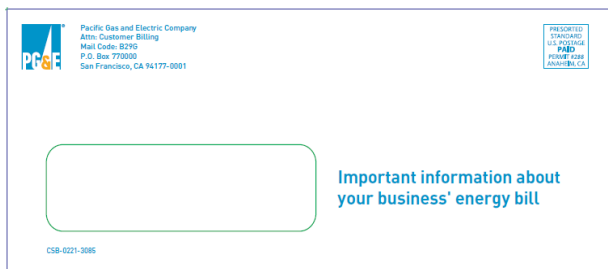
- PG&E's small business advisors are actively promoting this program that helps businesses find ways to save money and energy.
- PG&E reached ~82K SMB customers via email. Over 30K customers opened the email (36.72% open rate). ~1,500 customers acted upon receiving the email (2.3% click rate).
- Additionally, PG&E received over 150 emails requesting 1:1 conversations with the small business advisor team to evaluate their options directly from the email outreach.



Informative materials



In-language support 2-AtchA-27



An outreach to small business customers to ease concerns and offer solutions before COVID-19 emergency customer protections end

- On February 22, PG&E sent a letter to our small business customers (~56K accounts) with a detailed outline of bill payment and management options including the customer's account status.
- Customers with email addresses on file (~13K) also received a follow-up email outlining assistance. About 6,500 customers opened the email (50% open rate) and 650 customers interacted with content (5% click rate), making this outreach one of the highest engagement categories.
- PG&E will be launching an outbound call campaign to further support small business customers who are behind their payments.

Coming up in 2021

Project	Description
1. Digital Media Campaign Relaunch	- Adjust campaign messaging and offers in line with small business needs - Introduce key business resources and tools with an emphasis on payment support
2. Business Resources and Tools Page	- Update the page with the latest content available for small business customers - Design customer nurture experiences
3. New Content Development	- Launch and promote new content developed (resiliency resources, energy efficiency tips) - Identify additional content opportunities that would support small business customers

Leveraging PG&E platform technology, key functions like bill pay, password reset, and start/stop/transfer service could be made even simpler by through an AI-powered chatbot. Over time, this chatbot would get smarter —better responding to our customers' inquiries and predicting needs in advance.

Key Points:

A three-phase approach:

Crawl – direct customers to online help articles. (2021)

Walk – Integrate into the logged-in state. (2021-2022)

Run – be able to interact directly with a Customer Service Representative. (2022)

2-AtchA-30



Hi Nancy! I am PG&E's virtual assistant. How can I help you today?

How much is my bill this month?



Your bill for March is \$130.34. Would you like to pay it now? If so, we can charge the card you have on file now ending in 5555.

CONFIRM PAYMENT

If you would like to change payment types, say "Change Payment".

Thank you! That was fast!



Potential Project: Historic Outage Reporting



NEW SERVICE: Online Historic Outage Information

- A web-based tool where customers can have a historic look back at outage history affecting their premises.
- Tool to pull outage history for up to 12 months after the outage occurs.
- Tool covers all outage types: planned, unplanned and momentary.
- Tool to include duration of outage, cause and affected area.

SGIP's focus on Impacted Customers

SGIP work outlined here pertains to section 2.1.4 of the MOU

The **Self-Generation Incentive Program (SGIP)** provides financial incentives to install energy storage (batteries) at a home or business for backup power and other purposes

Equity Program

- Equity program is fully subscribed

Equity Resiliency Program

- Equity Resiliency program for critical customers is now fully subscribed
- There are currently 3 SMBs participating in Equity Resiliency

Mass Market Funds

- Mass market is still available at \$0.22-\$0.30/Wh for all interested small businesses (\$12.8M still remaining)

New* Generator Rebate

- Launched in Sept 2020 for HFTD water well customers
- Potentially expanding to cover Small Business Customers

A battery storage system performs 2 main functions:

- 1) **Storage:** It procures electricity from the grid or home solar panels for regular use (Time Of Use rate arbitrage) or to be stored and used later.
- 2) **Backup power:** When shutoffs occur, a home battery can provide power for several hours to multiple days, depending on battery size, critical energy needs and (if paired with solar panels) weather conditions.

Financial commitment outlined here pertains to Outreach, Support & Digital activities described in Article 2 and Article 6 of the MOU. This financial report pertains to section 2.1.5 of the MOU

SBUA Settlement	2020 EOY Spend	2021 Forecast Spend	2021 YTD Spend
Total (in Millions)	\$6.978	\$6.625	\$1.524

2020 Total - High Level Breakdown

Customer Outreach, Service, & Strategy - \$3.859M

- SMB START Onboarding/Milestone Team
- SBE Team Outreach and service work
- Affinity Partners & Community Outreach
- Express Connections
- PSPS Event work
- SMB General

SMB Marketing - \$820k

- Digital Resources Marketing
- Here for Business
- Welcome Series
- Newsletter

Digital Resources - \$985k

- FirstAdvisor Suite
- Uplight (FirstAdvisor) Enhancements

Customer Insights & Research - \$675k

- Business Advisory Forum
- Customer Insights PMS

Rates & Billing- \$638k

- TOU Transition
- PDP Maintenance

We are continuing to harden our electric grid to reduce wildfire risks, working nonstop to lessen the impact of Public Safety Power Shutoffs (PSPS) and providing more resources to customers and communities before, during and after PSPS events.

REDUCING WILDFIRE RISKS



System hardening on: **180**
CIRCUIT MILES



Tracking conditions with: **300**
NEW WEATHER STATIONS



Enhanced vegetation management on: **1,800**
HIGH-RISK CIRCUIT MILES



Monitoring for wildfires with: **135**
NEW HIGH-DEF CAMERAS

REDUCING PSPS IMPACTS



Limiting the number of customers impacted by installing **275+** additional distribution sectionalizing devices and transmission switches



Weather modeling improvements and **5 days** of forecast data



Helping to keep the power on with **10** substations prepared for temporary generation and **5** additional microgrids constructed to power key community resources

2-AtchA-34

SUPPORTING CUSTOMERS AND COMMUNITIES



Customer notifications in **16 languages** and **new Address Alerts** to keep informed about any address



Personally reached out to 1300 Small Critical customers for PSPS preparedness and gather accurate contact information



Offering rebate programs for customers who rely on well water and purchase generation



Targeting additional partnerships with Community-Based Organizations to support customers with Access and Functional Needs



Meal replacement options for customers in 46 counties

Economic Development, Trade Professional & Supply Chain Responsibility



Proactive Outreach & Enrolled Customers

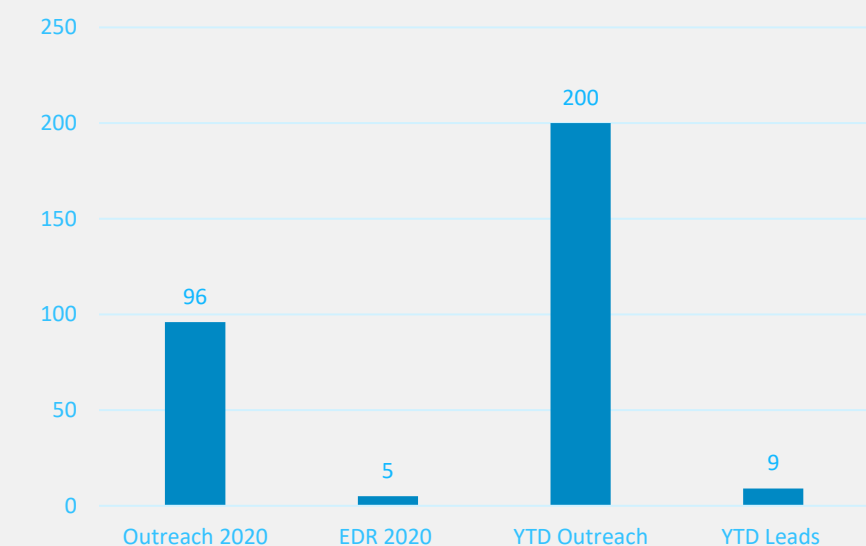
Economic Development work outlined in the following slides pertains to section 3.1 of the MOU



2020 Year-End Accomplishment:

- 96 call outreach to identify economically impacted customers.
- 5 small business customers qualified & enrolled in the EDR

EDR Outreach 2020 Total and 2021 YTD progress:



Eligibility guidelines for SMB EDR

Small business program for customers <150kW

Small business program cap is 5MW

Standard Program enrollment now 150kW minimum

Aggregation of meters possible (to be a campus) within 1,500' radius

All customers must provide energy savings/renewable /DR reduction of 5% by the end of their 5-year contract

Trade Professional work presented here pertains to section 5.3 of the MOU

2019

Utilizing On Bill Financing Program for EE Projects

48% of Total Loans were administered to SMB customers for a total loan allocation of 26 million dollars

Rebate Program

Administered 999 rebate applications for a total of 1.1 million dollars in rebates to SMB customers



2020

Utilizing On Bill Financing Program for EE Projects

50% of Total Loans were administered to SMB customers for a total loan allocation of 14 million dollars. (Total Loan applications for OBF were reduced by 50% due to COVID 19 impacts)

Rebate Program

Administered 517 rebate applications for a total of 1.3 million dollars in rebates to SMB customers

*** COVID 19 Impacts**



Supply Chain work presented in the following slides pertains to sections 5.1 and 5.2 of the MOU

2020 Program Updates



- Strategic Sourcing
 - In 2020, we held the first *live* Strategic Sourcing virtual training and included Sourcing and Line of Business Subject Matter Experts.
 - We've already held a *live* Strategic Sourcing virtual training during the first quarter of 2021 in partnership with the Fresno Black Chamber of Commerce.
- Small Business Enterprise (SBE) Scholarships
 - In 2020, we improved the scholarship nomination process which resulted in increased supplier participation and encouraged internal stakeholder engagement in the nomination process.
- SCR Website TAP Access
 - An online Learning Management System (LMS) was developed last year to train businesses on topics including disaster preparedness, cybersecurity and future proofing your business. We will fully launch LMS in the Spring of 2021.

PG&E's Step-by-Step Strategic Sourcing process

**Company Size Survey
Predominantly SBE**

A. 1-20 employees	40%
B. 21-100 employees	23%
C. 101-1,000 employees	10%
D. 1,001-10,000 employees	1%
E. 10,001+ employees	1%
No Answer	35%

381 Registrants

- 45 or 12% have worked w/PG&E
- 336 or 88% have not worked w/PG&E

Services

- 47 registrants were in construction, gas measurement/control/safety, electrical/mechanical engineering, power distribution, earthwork, or other related service areas.
- **334 registrants were in Professional Services, IT, Staffing, HR, Car Services, Uniforms, etc.**

TAP Supplier Development Scholarship Program

- **UC Berkeley, Haas Business School,**
 - Financial Analysis for Leaders - Oct. 18 - Oct. 22, 2021
- **UCLA, Anderson Business School**
 - Management Development for Entrepreneurs (MDE) Program
 - No Dates for 2021 (tentatively Sept 18th - November 14th, 2020)
- **Stanford University, Graduate School of Business**
 - Latino Entrepreneur Initiative
 - Cohort 11: May 5th, 2021-July 10th, 2021
 - Cohort 12: September 29th, 2021-December 4th, 2021
- **Dartmouth University, Tuck Business School**
 - Building a Successful Diverse Business - May 23-June 4, 2021
 - Growing an Established Diverse Business - June 13-June 25, 2021
- **University of Washington,**
 - Minority Business Executive Program - September 19th -30th, 2021
- **St. Mary's College – Open to Non-Suppliers**
 - WRMSDC Business Growth Acceleration Program (BGAP) – tentatively between mid-Oct.'21 and mid-Nov.'21. Graduation will likely be in late April to early May 2022.



April 1st 2021 - 10 of 28
Supplier Development Scholarship
Nominations are SBE

Free Access to Technical Assistance Program Training

<https://www.pgetap.com/>

The current courses include disaster preparedness, workplace safety/compliance, cybersecurity and business global reach, with more to come.



- \$2.71Billion spent with SBEs in 2020.
- We continue to consider small business status when evaluating RFPs.
- We continue to report small business results in PG&E's Corporate Responsibility Report.
- A Barriers-to-Entry team was launched in 2020 to analyze and address internal processes that impede some small businesses from competing.

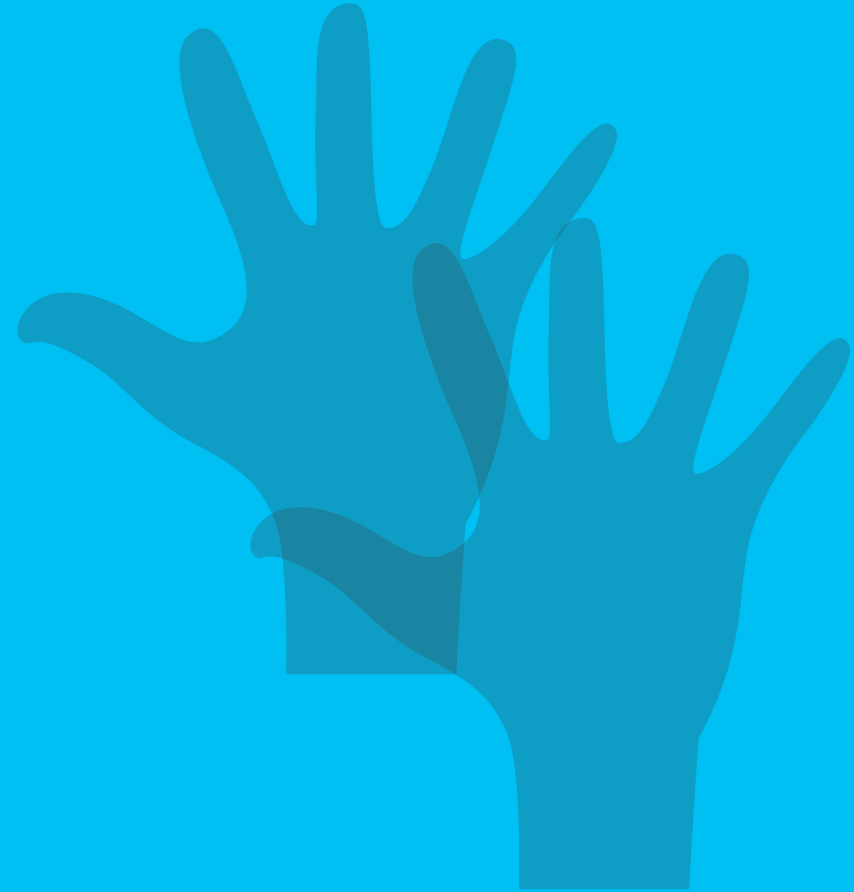


Small Business Adopters of New Energy Technologies

In section 2.1.3 of the MOU, PG&E and SBUA agree to jointly determine the scope of the study and report



Questions?



PACIFIC GAS AND ELECTRIC COMPANY
CHAPTER 2
ATTACHMENT B
MEMORANDUM OF UNDERSTANDING BETWEEN
CENTER FOR ACCESSIBLE TECHNOLOGY AND
PACIFIC GAS AND ELECTRIC COMPANY ON ACCESSIBILITY
IMPROVEMENTS FOR DISABLED CUSTOMERS

**MEMORANDUM OF UNDERSTANDING
BETWEEN
THE CENTER FOR ACCESSIBLE TECHNOLOGY
AND
PACIFIC GAS AND ELECTRIC COMPANY
ON
ACCESSIBILITY IMPROVEMENTS FOR DISABLED CUSTOMERS**

The Center for Accessible Technology (CforAT) and Pacific Gas and Electric Company (PG&E) (collectively, the Parties) hereby enter into this Memorandum of Understanding (MOU) pertaining to the revenue requirement phase of PG&E's upcoming test year 2023 General Rate Case (GRC).

ARTICLE 1 RECITALS

1.1 On or before June 30, 2021, PG&E will file its 2023 GRC application, which will address electric distribution, gas distribution, and electric generation rates for the years 2023 through 2026.

1.2 CforAT represents the interests of disabled customers.

1.3 PG&E provides electricity and gas service to much of Northern California. PG&E provides a number of services and support for disabled customers.

1.4 In PG&E's 2014 GRC application, CforAT and PG&E presented a joint proposal to improve accessibility for disabled customers that was approved by the California Public Utilities Commission (Commission) in its Decision 14-08-032.

1.5 In PG&E's 2017 GRC application, CforAT and PG&E presented a MOU to improve accessibility for disabled customers that was approved by the California Public Utilities Commission in its Decision 17-05-013.

1.6 In PG&E's 2020 GRC application, CforAT and PG&E presented a MOU to improve accessibility for disabled customers that was approved by the California Public Utilities Commission (Commission) in its Docket A.18-12-009.

1.7 CforAT and PG&E have met regularly to discuss implementation of the 2020 GRC MOU.

1.8 As an outgrowth of those implementation discussions, CforAT and PG&E commenced discussions of matters of common interest for the years 2023-2026. These discussions led to the current MOU.

ARTICLE 2 ACCESSIBILITY IMPROVEMENTS

2.1 Level of Spending: The Parties agree that PG&E will spend the equivalent of at least \$1.7 million per year (a total of \$6.8 million for the 2023 GRC period) on activities to improve accessibility. Eligible activities for which PG&E may spend that funding are described in Attachment A. This spending will be incremental to any required spending on accessibility requirements that is ordered by the California Public Utilities Commission in decisions issued during the GRC cycle separate from this General Rate Case.

2.2 Annual Reporting: The Parties agree that PG&E will prepare and distribute an annual report to CforAT and any interested parties on PG&E's activities and spending to promote accessibility. The annual report will, among other things, address whether PG&E's spending has met the level set forth above and whether the Parties have agreed to any specific priorities for the upcoming calendar year at the annual consultation described in Section 2.4 below. The Parties agree that PG&E will distribute the annual report by the end of April for the prior calendar year.

2.3 Disability Access Coordinator for Accessibility Issues: The Parties agree that PG&E will continue to employ a Disability Access Coordinator who will be responsible for coordinating and shaping Company-wide strategies to improve accessibility. PG&E will consult with CforAT should the need arise for additional staff to support the Disability Access Coordinator.

2.4 Consultation with Interested Parties: The Parties agree that, prior to the start of each calendar year, PG&E will meet with CforAT and any interested parties to discuss planned accessibility spending for the upcoming calendar year.

ARTICLE 3 ADDITIONAL PROVISIONS

3.1 Focus on De-Energization: The parties agree that during the term of this agreement, PG&E will prioritize the accessibility of customer communications and engagement around the issue of de-energization as outlined in PG&E's 2021 AFN Plan submitted to the CPUC on 2/1/21:

- PG&E remains committed to the continuous improvement of its websites to better meet the diverse needs of its customers. PG&E has worked to ensure its existing website conforms to Web Content Accessibility Guideline (WCAG) 2.0 AA. As we launch new features and functionality to www.pge.com and <https://pgealerts.alerts.pge.com/>, we ensure compliance with updated WCAG standards, specifically WCAG 2.1AA. Any new digital platforms planned for development, for example, a mobile app, will also ensure compliance with updated WCAG standards, specifically WCAG 2.1 AA.
- PG&E will ensure that information about PSPS and associated preparedness is available in accessible formats. PG&E is committed to ensuring that critical information about PSPS preparedness, as defined in its 2021 Wildfire Mitigation Plan (WMP) Section 8.4, is available in accessible formats. For those customers who have signed up to receive bills in non-standard formats in large print or Braille, PG&E will use its best efforts to transmit printed materials, as defined in the Wildfire Mitigation Plan at page 926, of critical information about PSPS preparedness to such customers at their billing address on file in the same non-standard format as their bills. Information in accessible format is also available to all other customers on request.
- PG&E will use its best efforts to include key information in large print in all standard printed materials regarding PSPS preparedness and de-energization.

- PG&E will provide information to CforAT about all disability-related CBOs with which it partners on issues related to de-energization, including information on the resources (financial or other) that PG&E provides to such organizations as part of the partnership. PG&E and CforAT will discuss options for ensuring that these organizations are provided with appropriate resources to support the work that they do to assist PG&E with interactions with the disability community in the context of de-energization.

3.2 Regionalization Issues: In Application A.20-06-011, pending before the California Public Utilities Commission, PG&E is seeking authorization for a proposal to regionalize its operations in its service area (Regionalization Proposal), including separating out functions within boundaries of five regions. To the extent that there are disputes regarding the impact of the implementation of the Regionalization Proposal on PG&E's ability to continue to maintain and/or improve the level of service it provides to customers with disabilities, CforAT and PG&E agree to meet and confer in that forum to resolve any disputes that are not amenable to negotiations in that forum rather than the GRC process.

ARTICLE 4 GENERAL PROVISIONS

4.1 Term and Effectiveness: This MOU shall only become enforceable upon the Commission's issuance of a final decision in PG&E's 2023 GRC that specifically approves and funds the provisions of this MOU. The commitments in this MOU shall then remain effective for four years or until the Commission issues a final decision in PG&E's subsequent GRC, whichever is earlier. After the first two years of the four year term of this MOU, the parties agree to meet and confer about the level of funding set forth in Section 2.1 herein to discuss whether the level of spending should be increased, or remain unchanged, based on then existing circumstances. If, by 90 days before this decision is due to expire, it does not appear that a final decision in PG&E's subsequent GRC is imminent, the Parties agree to meet and confer to discuss how access issues will be addressed until a further GRC decision is issued.

4.2 Non-Precedential: The Parties agree that this MOU is non-precedential.

4.3 Joint Support: The Parties shall jointly request Commission approval of this MOU.

4.4 Entire Agreement: This MOU represents the entire understanding and agreement of the Parties with respect to the matters described herein, and, except as described herein, supersedes and cancels any and all prior oral or written agreements, principles, negotiations, statements, representations, or understandings among the Parties pertaining to these matters.

4.5 Amendment: The MOU may be amended or changed only by a written agreement signed by the Parties.

4.6 Counterparts: This MOU may be executed in counterparts, each of which shall be deemed an original, but all of which together shall constitute one and the same instrument.

4.7 Unified, Integrated Agreement: The Parties intend the MOU to be interpreted and treated as a unified, integrated agreement. In the event the Commission rejects or modifies this MOU, the Parties will meet and confer to discuss renegotiation of this MOU.

In Witness Whereof, intending to be legally bound, the undersigned have duly executed this Memorandum of Understanding on behalf of the parties they represent.

CENTER FOR ACCESSIBLE TECHNOLOGY

By: _____

Name: _____

Date: _____



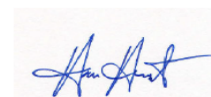
MELISSA W. KASNITZ
6/21/21

PACIFIC GAS AND ELECTRIC COMPANY

By: _____

Name: _____

Date: _____



Aaron August
6/23/2021

ATTACHMENT A

ELIGIBLE ACTIVITIES

The following types of costs associated with accessibility improvements are eligible for accounting toward the target spending level of \$1.7 million per year.

Disability Access Coordinator and Related Work

- Costs associated with the Disability Access Coordinator and Sr. ADA Specialist's roles for accessibility issues, including salary and benefits, not to exceed 15% of the total spend, annually. These costs will not include the costs of basic office or administrative support the Company generally provides for all employees, nor costs associated with supporting PG&E's Emergency Response efforts or activities unrelated to the support of ADA and accessibility will not be considered eligible.
- Costs associated with the production of the annual report and consultation with interested parties.
- Costs associated with appropriate professional development activities, such as those furthering understanding of best practices related to accessibility programs.

Website Accessibility

- Costs associated with website accessibility, including the following:
 - Work performed for new content and web pages to meet the WCAG 2.1 standards.
 - Work performed to address any newly identified or continuing web accessibility issues.
 - Ongoing training and review of accessibility for IT, website personnel, and related personnel.
 - Accessibility of mobile web based on WCAG 2.1 standards, and mobile applications (apps) based on applicable standards. This activity may also include work required to comply with any new standards that become applicable.
 - Focus group/usability testing of new website enhancements to ensure they meet the needs of disabled customers.

Communications Access Issues

- Costs associated with the continued development and maintenance of a customer database that identifies PG&E customers with disabilities. This also includes promoting additional awareness and expanded use of this resource across the various lines of business at PG&E.
- Costs associated with outreach to PG&E's disabled customers including determining and tracking their preferred communication format and providing information in alternative formats.
- Costs associated with maintaining TTY and Relay systems and training personnel at PG&E's Contact Centers.
- Ongoing training and review of accessibility for PG&E's Contact Center employees.
- Costs associated with the ongoing efforts to provide key information in large print on outgoing customer communications and to promote employee awareness of this effort across all lines of businesses at PG&E.
- Costs to expand the provision of alternative formats for customer information.
- Costs for continued training on communications access issues.

Local Offices

- Costs associated with follow-up inspections at local offices to identify remaining or emergent accessibility issues.
- Costs associated with ongoing training for local office personnel in maintaining and/or improving accessibility.

Neighborhood Payment Centers

- Costs associated with ongoing survey/alternative efforts to monitor accessibility at Neighborhood Payment Centers.
- Costs associated with the ongoing monitoring of vendor accessibility.
- Costs associated with identifying new accessible locations.
- Costs associated with ongoing distribution of an up-to-date list of accessible locations.

Temporary Construction Practices

- Costs associated with ongoing training regarding accessibility.
- Equipment maintenance/replacement for use in temporary construction sites (up to 10% of the total spending target in Section 2.1).
- Costs associated with the continuing monitoring for compliance with protocols.
- Costs for Audible Alerts at PG&E construction sites.

Utility Poles

- Costs for continued coordination with local governments regarding accessibility issues arising out of the placement of utility poles.
- Costs associated with Rule 20A accessibility issues.

* * * *

PACIFIC GAS AND ELECTRIC COMPANY
CHAPTER 3
PRICING PRODUCTS AND INCOME-QUALIFIED PROGRAMS

PACIFIC GAS AND ELECTRIC COMPANY
CHAPTER 3
PRICING PRODUCTS AND INCOME-QUALIFIED PROGRAMS

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PACIFIC GAS AND ELECTRIC COMPANY
CHAPTER 3
PRICING PRODUCTS AND INCOME-QUALIFIED PROGRAMS

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PACIFIC GAS AND ELECTRIC COMPANY
CHAPTER 3
PRICING PRODUCTS AND INCOME-QUALIFIED PROGRAMS

A. Introduction

1. Scope and Purpose

This chapter demonstrates that Pacific Gas and Electric Company's (PG&E or the Company) 2023 expense forecast for Pricing Products and Income-Qualified Programs is reasonable and should be approved by the California Public Utilities Commission (CPUC or Commission). Pricing Products activities primarily support rate programs, new rates, rate structure changes and rate transitions. The chapter also requests funds for Income-Qualified Programs initiatives that are not funded by Public Purpose Program funds or greenhouse gas (GHG) revenues, including Natural Gas Appliance Testing (NGAT), Disadvantaged Communities (DAC), and Community-Based Organization (CBO) cross coordination activities, ongoing maintenance of the Low Income Home Energy Assistance Program (LIHEAP) Portal, and Cooling Centers.

The Pricing Products and Income-Qualified Programs 2023 expense forecast reflects ongoing costs of residential rate reform activities that were previously recorded beginning in 2015 in the Residential Rate Reform Memorandum Account (RRRMA)¹ and will continue to be recorded in the RRRMA through 2022.² PG&E is not requesting recovery of 2015-2022 residential rate reform costs in this General Rate Case (GRC) because the Commission has approved an alternative process for recovery in Decision (D.) 17-05-013 and D.20-12-005.³ Beginning in 2023, PG&E proposes to recover the forecasted costs for rate reform activities through GRC revenues

¹ Advice Letter (AL) 4672-E established the RRRMA, pursuant to D.15-07-001, p. 262. AL 4672-E, filed July 22, 2015 and approved August 19, 2015.

² Per D.19-07-004, p. 216, Ordering Paragraph (OP) 24, the Time-of-Use (TOU) Transition began in October 2020 and will conclude 18 months later in March 2022. Final end-of-bill protection notices will be sent in March 2023.

³ The Commission approved the recovery mechanisms for 2015-2019 rate reform costs recorded to the RRRMA through its adoption of the joint party settlement agreements in A.15-09-001 (August 3, 2016), p. 1-8 to p. 1-10, and D.20-12-005, pp. 33-34.

to allow the completion of Default TOU Transition and required ongoing annual Residential Rate Comparison communications. The 2023 test year expense forecast for these activities that would otherwise be recorded to the RRRMA is \$2.5 million.⁴

Costs to implement some future rate changes, new rates, and rate transitions currently under consideration in certain other CPUC proceedings are not included in the Pricing Products 2023 GRC forecast because the scope of the implementation work cannot yet be estimated, and PG&E has requested that those costs be recorded to balancing or memorandum accounts for future cost recovery consideration. This includes:

- The percent of Income Payment Program Pilot in development in Rulemaking (R.) 18-07-005;
- PG&E's proposed Commercial Electric Vehicle Day-Ahead (DA) Hourly Real-Time Pricing (RTP) Pilot in Application (A.) 20-10-011; and
- PG&E's proposed Commercial and Industrial DA Hourly RTP in A.19-11-019 (Exhibit-RTP).

PG&E is not requesting capital for Pricing Products and Income-Qualified Programs in this GRC.

2. Summary of Request

a. Expense

PG&E requests that the Commission adopt its 2023 expense forecast for Pricing Products and Income-Qualified Programs of \$22.9 million, which is \$5.4 million higher than 2020 recorded GRC costs, due primarily to three reasons:⁵

- 1) An increase in the number of NGAT treatments;

⁴ Exhibit (PG&E-6), Workpaper (WP) 3-9 provides Pricing Products' 2020 recorded RRRMA and GRC spending by activity compared with the 2023 GRC forecast for the same activities. Line 38 includes the portion of the 2023 GRC forecast for rate reform activities that would otherwise be recorded to the RRRMA.

⁵ Exhibit (PG&E-6), WP 3-9 provides an equivalent comparison of 2020 GRC and RRRMA recorded costs to the 2023 GRC forecast which reflects the proposal to recover all rate reform costs through GRC revenues in the 2023 GRC cycle. This equivalent comparison indicates Pricing Products and Income-Qualified Programs 2023 forecasted costs of \$22.9 million is a reduction of \$10.9 million (-32 percent) from combined 2020 RRRMA and GRC recorded costs of \$10.8 million due primarily to the wind down of the Default TOU Transition (line 38).

- 2) The expansion of Medical Baseline education and outreach; and
- 3) The transition of required annual Residential Rate Comparison communications from RRRMA treatment to this GRC forecast.

These cost increases are slightly offset by a reduction in costs resulting from work completed in 2020 to prepare for the transition of non-residential customers to rates with new TOU periods. The transition was completed for eligible customers in 2021.

These activities are discussed in more detail in Section B.1.b. – Activities Overview and 2023 Forecast Drivers.

b. Memorandum of Understanding With the National Diversity Coalition

PG&E also presents a Memorandum of Understanding (MOU) for Commission approval between PG&E and the National Diversity Coalition (NDC). The MOU includes key areas of partnership between PG&E and NDC to support diverse communities, including, among other things, leveraging new pathways for outreach and education, as well as supporting economic opportunities for communities of color. The MOU is described in Section B.2 below and is attached as Attachment 3A to this chapter.

3. Overview of Recorded and Forecast Costs

a. Expense

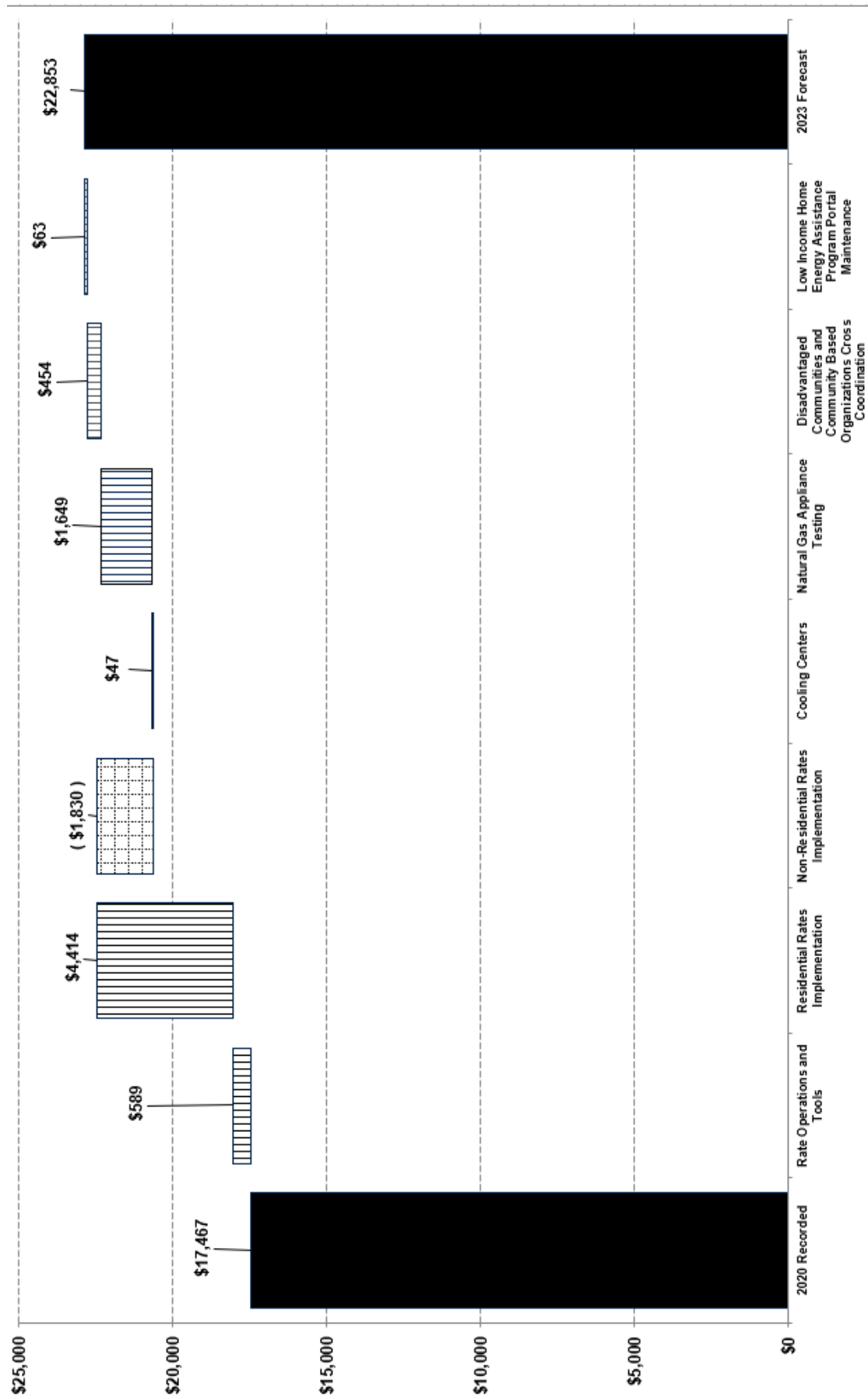
Figure 3-1 illustrates the total change between 2020 GRC recorded costs and the 2023 GRC forecast for Pricing Products and Income-Qualified Programs.⁶ The 2023 forecast of \$22.9 million consists of \$14.7 million for Pricing Products and \$8.1 million for Income-Qualified Programs compared to the 2020 total recorded costs of \$17.5 million which consists of \$11.5 million for Pricing Products and \$5.9 million for Income-Qualified Programs.⁷ The major differences

⁶ Exhibit (PG&E-6), WP 3-7 provides a summary of Pricing Products and Income-Qualified Programs 2020 recorded and 2023 forecasted GRC costs and changes for each initiative.

⁷ Exhibit (PG&E-6), WP 3-8 provides Pricing Products and Income-Qualified Programs 2020 recorded GRC spending by activity for each initiative, compared with the 2023 GRC forecast for the same activities.

- 1 between PG&E's 2020 GRC recorded costs and 2023 forecast are
- 2 summarized in Section C. – Activities, Costs, and Forecast Drivers by
- 3 Major Work Category (MWC).

FIGURE 3-1
PRICING PRODUCTS AND INCOME-QUALIFIED PROGRAMS EXPENSE WALK (2020-2023)
(THOUSANDS OF NOMINAL DOLLARS)



1 **b. Capital**

2 PG&E did not record capital costs for Pricing Products and
3 Income-Qualified Programs in 2020 and is not requesting capital for
4 Pricing Products and Income-Qualified Programs in this GRC.

5 **4. Support for Request**

6 Beginning in 2012, as a result of the State of California's policies
7 designed to achieve certain clean energy goals, non-residential customers
8 have been transitioned to mandatory TOU rates and default opt-out
9 Peak-Day Pricing (PDP) rates, while residential customer are being
10 transitioned to TOU rates which began with an opt-in TOU pilot in 2016.
11 Rates with prices that vary by day (time-varying rate plans)⁸ encourage
12 customers to shift usage to times of day when electricity generation costs
13 are lower and renewable resources are more plentiful. These rate plans are
14 enabled by Advanced Metering Infrastructure devices that record and
15 transmit 15-minute interval energy usage data and are a critical component
16 to help the state achieve its clean energy goals.

17 The Pricing Products portion of the forecast in this chapter is reasonable
18 because the proposed activities support California's clean energy goals by
19 helping PG&E's customers that are faced with more complex, time-varying
20 rate plans to better understand and control their energy bills by providing:

- 21 • Personalized information to help customers understand their rate plan
- 22 options;
- 23 • Self-service tools built and maintained by PG&E that allow customers to:
- 24 – View their energy usage and billing statistics,
- 25 – Evaluate adoption of clean energy technologies such as solar,
- 26 storage, and electric vehicles, and

8 In general, time-varying energy rates charge a different amount depending on the time of day, and usually also the season of the year. Dynamic pricing structures are one type of time-varying rate that introduce the element of price volatility to reflect market conditions and can also include exposure to marginal electricity costs, usually from wholesale generation markets. Dynamic pricing differs from TOU tariffs which are based on prices that are fixed for months or years at a time to reflect average, embedded supply costs. Dynamic Pricing rates include temperature-triggered offerings such as Critical Peak Pricing (CPP), Peak Time Rebate, and Variable Peak Pricing, as well as various forms of RTP.

1 – Change their rate plans online;

- 2 • Customers with clear and comprehensive rate plan education in a
3 proactive and ongoing basis; and
4 • Notification of rate plan structure changes and rate plan transitions.⁹

5 The Income-Qualified Programs portion of the GRC forecast in this
6 Chapter is reasonable because it funds program activities that support
7 customers' physical and financial health and safety (NGAT and Cooling
8 Centers), maintains the LIHEAP portal and supports PG&E's expanded work
9 in DACs and with CBOs as follows:

- 10 • NGAT testing helps ensure safe operating conditions for customers'
11 natural gas appliances and is performed in conjunction with the
12 installation of certain Energy Efficiency (EE) measures within the Energy
13 Savings Assistance (ESA) Program and other residential EE
14 programs;¹⁰
15 • Cooling Centers, which are co-funded with counties in PG&E's service
16 territory, provide a place to cool off during extreme heat events for
17 customers that lack air conditioning and are especially vulnerable to
18 high-heat events;
19 • The LIHEAP portal streamlines the processing of pledges made by
20 customers and organizations providing bill relief to assist
21 income-qualified customers that are struggling to pay their bill;¹¹ and

⁹ Self-service tools that provide personalized information for customers online in pge.com's "Your Account" portal include rate comparisons, usage data analytics and energy alerts. Notifications to customers to provide proactive rate plan education include the annual Residential Rate Comparison communication for all residential customers that proactively keep them informed about their rate plan options. Notifications of rate plan and structure changes include communications sent to non-residential customers ahead of their transition from flat to TOU rates and rates with new TOU periods.

¹⁰ This includes the Multi-Family Energy Savings Program and Pay for Performance programs.

¹¹ PG&E's LIHEAP portal is a compliance requirement that the Commission directed PG&E to develop, pursuant to D.20-06-003, p. 151, OP 27.

- State policies are driving expanded clean energy programs in DACs. Due to Commission directives related to DACs,¹² there is a growing need for PG&E resources to be focused on aligning these policies with the programs that support DACs across PG&E's territory. This work includes PG&E collaboration with CBOs, which are increasingly important for supporting the implementation of PG&E's programs in DACs and other vulnerable communities.

5. Organization of the Remainder of This Chapter

The remainder of this chapter is organized as follows:

- Section B – Program Overview;
- Section C – Activities, Costs, and Forecast Drivers by MWC;
- Section D – Estimating Method;
- Section E – Compliance With Prior Commission Decisions – National Diversity Coalition Stipulation;
- Section F – Balancing and Memorandum Accounts – Residential Rate Reform Memorandum Account; and
- Section G – Cost Tables.

B. Program Overview

1. Program Description

a. Management Structure

PG&E re-structured its Customer Care organization in March 2020 to better align customer service and support resources. With this change, PG&E established a Customer Operations (CO) and Enablement team that is responsible for the entire “meter to cash” process, including meter testing, customer billing, payment processing, credit and collection policy, pricing implementation.

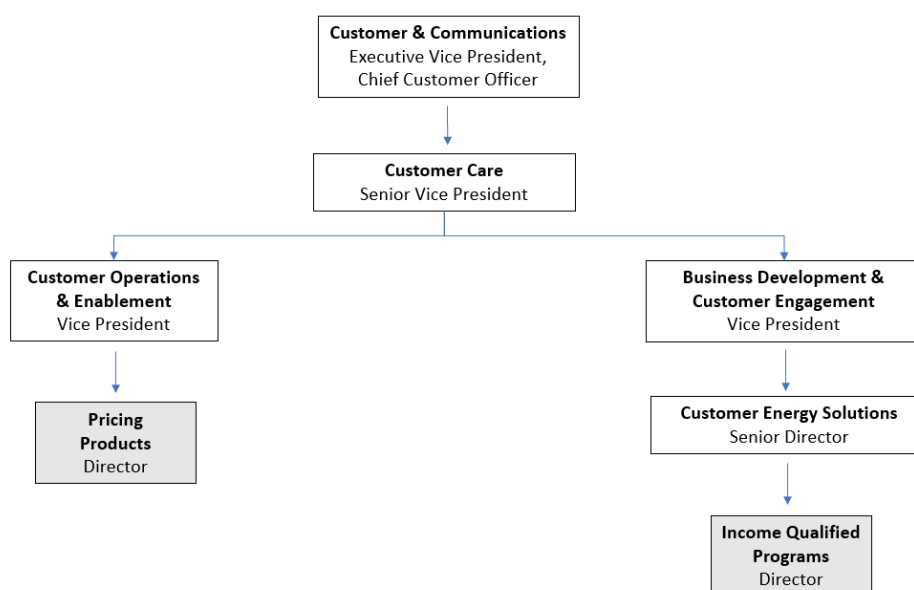
As part of this reorganization, PG&E moved the Pricing Products team from Customer Energy Solutions (CES) to CO and Enablement. The CO and Enablement team reports to the Senior Vice President

¹² A sample of current and recent Commission directives that require consideration of DACs include the Integrated Resource Planning Order Instituting Rulemaking (OIR) (R.)16-02-007, the Development of Rates and Infrastructure for Vehicle Electrification OIR, R.18-12-006, and the Building Decarbonization OIR (R.19-01-011).

(SVP) of Customer Care. The SVP of Customer Care reports to the Executive Vice President (EVP) of Customer and Communications who is also PG&E's Chief Customer Officer. PG&E established the EVP position in 2021, as described further in Exhibit (PG&E-6), Chapter 1.

The Income-Qualified Programs team remains part of CES. See the shaded areas in Figure 3-2 for an overview of how Pricing Products and Income-Qualified Programs are structured within PG&E's Customer Care organization.

**FIGURE 3-2
PRICING PRODUCTS AND INCOME-QUALIFIED PROGRAMS ORGANIZATIONAL STRUCTURE**



The Pricing Products organization consists of Rate Programs and Tools, which is 100 percent GRC-funded, and the GHG Revenue Return Program, which is separately funded. Income-Qualified Programs activities are primarily funded outside of the GRC (e.g., the California Alternative Rates for Energy (CARE) and ESA Programs), except for the NGAT Program, certain DAC and CBO activities as described herein, ongoing maintenance of the LIHEAP portal, and Cooling Centers, which are GRC-funded.

The Pricing Products and Income-Qualified Programs teams depend on many support organizations which charge into their budgets. The

costs these other organizations incur to support Pricing Products and Income-Qualified Programs' activities are reflected in the forecast and activities included in this chapter.¹³

b. Activities Overview and 2023 Forecast Drivers

This section describes the forecast for: (1) Rate Programs and Tools initiatives; and (2) Income-Qualified Programs GRC-funded initiatives.

1) Rate Programs and Tools

Rate Programs and Tools includes three initiatives: (a) Rate Operations and Tools; (b) Residential Rates Implementation; and (c) Non-Residential Rates Implementation. These initiatives are designed to ensure customers have meaningful and comprehensible rate plan options, support customers as they enroll in and continue on their selected rate plan (or as they are automatically enrolled, in the case of rate transitions), and enable customers to switch easily to a different rate plan. These initiatives also include the operation of CPP programs and Medical Baseline Program education and outreach.¹⁴

a) Rate Operations and Tools

Rate Operations and Tools includes costs to provide general program management across all Rate Programs and Tools initiatives, including business and regulatory planning, compliance, budgeting, governance, program alignment, and

¹³ Organizations supporting Pricing Products and Income-Qualified Programs' activities include: Customer Engagement – Business Energy Solutions and Local Customer Experience; Residential Services – Digital Strategy, Contact Center and Workforce Management; CO and Enablement – Complex Billing, Billing Operations and Printing and Bill Presentment; CES – Customer Insights, Demand Response Operations, Evaluation, Measurement and Verification and Data and Energy Management Products; Marketing and Communications – Solutions Marketing and Customer Communications; and Information Technology (IT) – Meter to Cash Systems (IT costs are not reflected in this chapter but are discussed in Ch. 10).

¹⁴ PG&E's CPP programs include SmartRate for residential customers and PDP for non-residential customers. CPP programs provide customers with a reduced electric rate in the summer season in exchange for shifting or reducing energy during event days. Medical Baseline is a discount for customers with certain medical equipment.

1 stakeholder management. Rate Operations and Tools also
 2 includes costs to perform business analysis and requirements
 3 for new rates, rate structure changes, rate transitions and rate
 4 tools. Rate tools help customers to: (a) understand the costs of
 5 all eligible rate plan options and change rate plans; (b) analyze
 6 how to make choices about energy options that impact their
 7 energy usage and bills such as EE measures, solar, storage,
 8 electric vehicles, and income-qualified discounts; and
 9 (c) manage their usage and costs on their rate plan. Such tools
 10 include those provided for customers online in pge.com's "Your
 11 Account" portal, including rate comparisons, usage data
 12 analytics, comparison analytics and energy alerts. Additional
 13 details for the initiatives and activities in this section are
 14 provided in the Rate Operations and Tools WPs.¹⁵

15 In 2020, PG&E spent \$3.2 million for Rate Operations and
 16 Tools activities. PG&E's 2023 forecast for Rate Operations and
 17 Tools activities is \$3.7 million, which is \$0.6 million higher than
 18 2020 recorded costs. The increase is due primarily to increased
 19 licensing fees for data services that support marketing
 20 campaigns.¹⁶

21 **b) Residential Rates Implementation**

22 Residential Rates Implementation includes planning,
 23 operational implementation,¹⁷ and customer Marketing,
 24 Education and Outreach (ME&O) for residential rate plan
 25 changes. PG&E uses a combination of general awareness
 26 efforts and direct outreach to inform residential customers about
 27 new rate plans, rate plan changes, rate plan transitions, rate

¹⁵ Exhibit (PG&E-6), WP 3-10 to WP 3-11 provides 2020 recorded and 2023 forecasted costs for Rate Operations and Tools activities.

¹⁶ Licensing fees are for the vendors Salesforce and Targetbase (M/A/R/C). Salesforce provides the platform utilized for digital education and outreach campaigns. Targetbase manages and operates the customer database used for campaign tracking, list generation, analytics and segmentation for education and outreach campaigns.

¹⁷ Operational implementation includes modifications to the billing system, manual billing processes and contact center readiness.

1 plan options, and energy management programs and tools.

2 Additional details for the initiatives and activities in this section
3 are provided in the Residential Rates Implementation WPs.¹⁸

4 PG&E spent \$3.0 million in 2020 GRC expense on targeted
5 rate plan campaigns for customers going through rate plan
6 changes and transitions and the necessary operational
7 changes. 2020 GRC-funded Residential Rates Implementation
8 activities included:

- 9 • Targeted summer and winter rate options and bill solutions
10 education and outreach campaigns for customers via
11 e-mail, digital media, on-hold messaging, and website
12 updates that displayed seasonal tips and provided tools for
13 managing energy usage;
- 14 • Monthly TOU Welcome direct mail and e-mail campaigns to
15 customers who voluntarily enrolled in a TOU rate plan;
- 16 • Outreach via direct mail to notify impacted customers of
17 changes to their rate plans (e.g., the elimination of E-TOU-A
18 and the modification to the summer TOU periods of E-6 and
19 EM-TOU occurring over three years with the elimination of
20 E-6 in 2023); and
- 21 • SmartRate™ CPP Program maintenance campaigns.¹⁹

¹⁸ Exhibit (PG&E-6), WP 3-12 to WP 3-16 provides 2020 recorded and 2023 forecasted costs for Residential Rates Implementation activities.

¹⁹ The campaigns included the following communications: a welcome e-mail for new SmartRate customers and a pre-season reminder (“Welcome Back”). There are currently ~52,000 customers on SmartRate.

1 In addition to GRC expense, PG&E recorded \$16.2 million
 2 to the RRRMA in 2020 for residential rates implementation
 3 activities, including Default TOU Transition.²⁰

4 PG&E's 2023 GRC forecast for Residential Rates
 5 Implementation activities is \$7.4 million, which is \$4.4 million
 6 more than 2020 GRC recorded costs of \$3.0 million. The
 7 increase is due primarily to an increase in Medical Baseline
 8 education and outreach to comply with Disconnections OIR
 9 (R.18-07-005) and required annual Residential Rate
 10 Comparison communication costs that were previously recorded
 11 to the RRRMA as explained in the Scope and Purpose section
 12 of the Introduction. PG&E's 2023 targeted ME&O will include:

- 13 • Education, rate plan options, programs, and tools for
- 14 customers most likely to be impacted by rate plan changes;
- 15 • Medical Baseline Program enhancements, including
- 16 customer acquisition and retention campaigns, welcome
- 17 letter development and execution, and additional healthcare
- 18 professional training and outreach connected with the
- 19 launch of the Medical Practitioner's Portal tied to require by
- 20 D.20-06-003;²¹
- 21 • Annual Residential Rate Comparison communications will
- 22 provide all residential customers with a rate comparison to
- 23 inform them of their rate options;

20 Exhibit (PG&E-6), WP 3-9 provides an equivalent comparison of 2020 GRC and RRRMA recorded costs to the 2023 GRC forecast which reflects the proposal to recover all rate reform costs through GRC revenues in the 2023 GRC cycle. This equivalent comparison indicates Pricing Products 2023 forecasted costs of \$7.4 million for Residential Rates Implementation is a reduction of \$11.8 million (-61 percent) from combined 2020 RRRMA and GRC recorded costs of \$19.2 million due primarily to the wind down of the Default TOU Transition (line 20). As explained above, the Commission approved the recovery mechanisms for 2020-2022 rate reform costs through its approval of the joint party settlement agreement in D.20-12-005, Attachment 1, pp. 23-24.

21 D.20-06-003, pp.152-153, OPs 35-38, requires PG&E to develop a procedure for qualified medical professionals to e-sign applications for the Medical Baseline Program. Note: incremental Medical Baseline activities connected with Public Safety Power Shutoff (PSPS) will continue to be tracked and recovered in the Wildfire Mitigation Balancing Account.

- Notification to customers on rates that are scheduled to be eliminated²² that they will be transitioned to an applicable rate if they take no action;
- ME&O execution to support customer awareness around the non-tiered TOU rate (E-TOU-D) and the pro-electrification rate (E-ELEC);²³ and
- Outreach to CBOs to support their efforts to educate customers about their rate options.

c) Non-Residential Rates Implementation

Non-Residential Rates Implementation includes planning and implementation of rate plan changes for commercial, industrial, and agricultural customers. It also includes ME&O to help non-residential customers select alternative rate plans, support their transition automatically to a new rate plan, and help them adjust to new rate plans by managing their energy use and bills. Additional details for the initiatives and activities in this section are provided in the Non-Residential Rates Implementation WPs.²⁴

In 2020, PG&E spent \$5.4 million to transition more than 500,000 non-residential customers to new mandatory TOU periods and new PDP event hours, as required by

²² Rate Schedule E-6 will be eliminated in 2023 (D.15-11-013, Appendix A. pp. 10-13) and Schedule E-TOU-B will be eliminated in 2025 (D.19-07-004, p. 214, OP 12).

²³ D.20-03-003, p. 52, OP 11, directed PG&E to propose a new opt-in, non-tiered, residential TOU rate with a fixed charge in GRC 2020 Phase II. Customers with electric vehicles, energy storage or electric heat pumps for water heating or climate control (space heating and/or cooling) would be eligible to enroll into to this rate. A residential electrification rate, E-ELEC, was subsequently included in A.19-11-019, Motion for Adoption of Residential Rate Design Supplemental Settlement Agreement (March 29, 2021), pp. 8-10.

²⁴ Exhibit (PG&E-6), WP 3-17 to WP 3-20 provides 2020 recorded and 2023 forecasted costs for Non-Residential Rates Implementation activities.

1 D.18-08-013.²⁵ The mandatory transition was completed for
 2 eligible customers in 2021 but will continue on an annual basis
 3 for customers that become eligible to transition to the rates with
 4 new TOU periods.

5 PG&E's 2023 forecast for Non-Residential Rates
 6 Implementation activities is \$3.6 million, which is
 7 \$1.8 million less than 2020 recorded costs. This decrease is
 8 attributable to reduction in the work required to
 9 transition non-residential customers to new mandatory TOU
 10 periods and new PDP event hours. In 2023, PG&E's efforts will
 11 include:

- 12 • Pre-and post-transition outreach and customer inquiry
 13 support for the transition of the remaining commercial,
 14 industrial, and agricultural customers from flat and legacy
 15 rate schedules to rate schedules with new TOU periods as
 16 required by D.18-08-013;
- 17 • Outreach and customer inquiry support for defaulting
 18 eligible non-residential customers with 24 months of interval
 19 data on TOU rates onto the PDP Program on a bi-annual
 20 basis;²⁶
- 21 • Support for PDP customers including in-season
 22 communications and event notifications;
- 23 • Digital outreach to support customers during the summer
 24 season when rates are higher;

25 D.18-08-013 adopted several settlements (including Standby, Medium and Large; Small Light and Power; and Agricultural Settlement Agreement motions filed January 31, 2018, January 29, 2018 and March 30, 2018, respectively) that specified new rate plan options and new TOU periods to be available in late 2019 for commercial, industrial and agricultural customers and become mandatory in late 2020 for commercial and industrial customers and early 2021 for agricultural customers. The new rates became available on an optional basis in March 2020. The mandatory commercial and industrial customer transition was delayed to align with the agricultural mandatory transition in March 2021 (AL 5785-E, approved April 20, 2020, effective April 19, 2020). New PDP event hours were also implemented with the new mandatory rates in March 2021.

26 D.18-08-013 and D.19-05-010 in the 2019 Rate Design Window proceeding approved settlements for the PDP program that included resuming the default of eligible customers onto the PDP program.

- Outreach to customers who stand to benefit from a different rate plan encouraging them to switch to their best available plan; and
- Content marketing to promote rate plan options and money-saving resources throughout the year.

PG&E expects to update TOU periods on a mandatory basis, and PDP event hours, for non-residential customers again in 2026. The non-residential period change is reflected in PG&E's 2020 GRC Phase II Rebuttal and the Commercial and Industrial Supplemental Settlement Agreement.²⁷ The cost to transition eligible Non-Residential customers to revised TOU periods and PDP event hours in 2026 is estimated to be \$11.6 million,²⁸ which is reflected in Exhibit (PG&E-11) Chapters 1 and 2.²⁹

2) Income-Qualified Programs

a) Natural Gas Appliance Testing

PG&E administers NGAT testing in conjunction with the installation of certain EE measures as part of the ESA Program and general EE multifamily and residential pay for performance Programs to ensure the safety of participating customers. After installing EE measures, PG&E contractors perform an NGAT in all homes that have at least one natural gas appliance affecting the living space. An NGAT involves testing the ambient air inside the residence to help ensure that the appliances are working properly and that the home is safe. PG&E's Central Inspection Program team also performs an additional Quality Assurance (QA) NGAT on a random sample of premises, as

²⁷ A.19-11-019, Exhibit (PG&E-7), p. 15-2, line 20 to p. 15-6, line 11 and PG&E's Motion for Adoption of Commercial and Industrial Rate Design Supplemental Settlement Agreement (Apr. 13, 2021), pp. 7-8.

²⁸ Exhibit (PG&E-6), WP 3-21 to WP 3-22 provides 2026 forecasted costs for Non-Residential TOU period update.

²⁹ Exhibit (PG&E-11), p. 2-7, Table 2-1, line 5; and p. 2-9, Table 2-2, line 3.

1 specified in the “Statewide Energy Savings Assistance Program
2 2017-2020 Cycle Policy and Procedures Manual.”

3 The NGATs are performed by ESA contractors who work as
4 subcontractors for the two ESA Program implementers. PG&E
5 provided testimony in the Income-Qualified Programs
6 Application for CARE, Family Electric Rate Assistance (FERA),
7 and ESA Programs to propose re-bidding these contracts in
8 2021 and 2022, using a competitive bidding process. This
9 process is intended to ensure the most competitive costs for
10 performing this important safety check in the ESA and EE
11 programs.³⁰

12 In 2020, PG&E spent \$5.8 million to perform 46,018 NGATs
13 and 6,826 NGAT QA tests. PG&E’s 2023 forecast for NGAT is
14 \$7.4 million to perform 52,076 NGATs and 8,106 NGAT QA
15 tests, which is \$1.7 million more than 2020 recorded costs. This
16 increase in costs can be attributed to an estimated five percent
17 increase in the number of ESA homes to be treated,³¹ a
18 three percent increase in the percent of ESA-treated homes
19 receiving an NGAT, and a 10 percent increase in the contract
20 labor cost.³² The \$1.6 million increase in forecasted costs can
21 also be partially attributed to the coronavirus (COVID-19)
22 pandemic which artificially reduced the number of homes

30 A.19-11-003, 2019 Income-qualified Programs Application, ESA Testimony (November 4, 2019), p. I-186, line 15, Section 2.

31 The 2023 homes treatment and resulting NGAT forecasts were developed by reviewing the treatment goals proposed in the 2019 Income Qualified Programs Application and anticipated future treatment goals based on the approved Bridge Funding AL (Energy Division Disposition of PG&E AL 4351-G-G/6035-E-B (dated January 27, 2021 and effective December 24, 2020)), which required a 50,000 homes treatment goal for the first 6 months of 2021. The 2019 Income Qualified Programs Application Proposed Decision was released on April 26, 2021 and included ESA home treatment goals that are significantly lower than both the PG&E proposed goals and the Bridge Funding goals. Given the uncertainty around home treatment goals, and the necessity of NGAT funding for safe operations, PG&E maintains the NGAT budget proposed in this testimony.

32 Exhibit (PG&E-6), WP 3-23 to WP 3-24 provides 2020 recorded and 2023 forecasted costs for NGAT. Labor rate for ESA NGAT contractors has been adjusted to meet market rates.

1 treated and the resulting 2020 recorded costs. The ESA
 2 Program temporarily shut down in-home services, which
 3 includes NGATs, to customers from March 18, 2020 until
 4 June 1, 2020 in compliance with Governor Newsom's COVID-19
 5 stay-at-home order.³³ As a result, 2020 NGATs and recorded
 6 costs were lower than initially forecasted. In 2020, there were
 7 minimal recorded NGAT costs for EE programs as some
 8 programs requiring NGAT were retired. The 2023 forecast
 9 includes three new EE programs that will require NGAT,
 10 resulting in an increase of \$0.2 million.

11 **b) Disadvantaged Communities and Community Based**
 12 **Organizations Cross Coordination**

13 PG&E's DAC team focuses on inclusion and participation of
 14 DACs in PG&E's service territory by participating in regulatory
 15 proceedings and emerging legislative developments to drive
 16 focus on DACs, engaging external stakeholders to support DAC
 17 programs, and increasing awareness by customers in DACs of
 18 available programs. DACs may be disproportionately burdened
 19 by multiple sources of pollution and suffer from a combination of
 20 economic, health, and environmental burdens.³⁴ Several
 21 current CPUC proceedings and decisions contain DAC-related
 22 directives, including but not limited to the following:

- 23 • Affordability OIR (R.18-07-006);
- 24 • Building Decarbonization OIR (R.19-01-011);
- 25 • De-Energization OIR (R.18-12-005);
- 26 • Development of Rates and Infrastructure for Vehicle
- 27 Electrification OIR (R.18-12-006);

33 Governor's Executive Order N-33-20 (March 19, 2020).

34 DACs are communities designated by California Environmental Protection Agency, pursuant to Senate Bill 535, using the California Communities Environmental Health Screening Tool, which was developed by the Office of Environmental Health Hazard Assessment to identify communities in California most burdened by pollution from multiple sources and most vulnerable to its effects, considering socioeconomic characteristics and underlying health status. DACs are identified by census tract and are those that scored above the 75th percentile using the Health Screening Tool.

- Disconnections OIR (R.18-07-005);
- Environmental and Social Justice Action Plan;
- Integrated Resource Planning (R.16-02-007); and
- Net Energy Metering Successor Tariff OIR (R.20-08-020).

Similarly, PG&E's CBO team is developing a comprehensive strategy and approach for engaging CBOs by building awareness and knowledge of services available to support customers in DACs in PG&E's service territory. PG&E collaborates with CBOs on outreach and engagement of its most vulnerable customers and will increase this collaboration as more CBOs are involved in developing and implementing PG&E customer programs.

The DAC and CBO team will focus on customer needs that are not addressed by the existing CARE, FERA, ESA, and San Joaquin Valley Electrification Pilots programs. PG&E's 2023 DAC and CBO forecast is \$0.5 million for the following activities:³⁵

- Providing regulatory support for emerging legislation and new proceedings that seek to drive new programming focus to enhance alternatives for DACs;
- Leading external stakeholder collaboration in developing new policies to support emerging programs;
- Developing enhanced partnerships with CBOs to leverage insights, resources, and outreach support to DACs and other vulnerable customer groups to drive awareness and education on cross-cutting utility programs; and
- Conducting studies to better understand the DAC customer segment and effectiveness of increasing awareness of available services. The primary goal of these studies is to identify how PG&E can improve its planning and future programs designed for DACs.

³⁵ Exhibit (PG&E-6), WP 3-25 provides 2020 recorded and 2023 forecasted costs for DAC and CBO work.

1 **c) Cooling Centers**

2 Cooling Centers are facilities open to the public during
3 summer months when the daily temperature exceeds a
4 temperature threshold. The CPUC initiated Cooling Centers
5 with a pilot program in 2007 and approved the Cooling Center
6 Program effective April 15, 2008.³⁶ Previously, PG&E's funding
7 to support Cooling Centers has come through the CARE
8 Program; however, the Commission determined in
9 D.17-12-009³⁷ determined that Cooling Centers should be
10 funded as part of the PG&E's GRC.

11 The forecast for PG&E's 2023 Cooling Center costs is
12 \$0.16 million, which is necessary to provide grants to support
13 the Cooling Centers run by counties and any new centers to be
14 included based on weather impact analysis.³⁸

15 **d) LIHEAP Portal Maintenance**

16 The state of California, through local LIHEAP agencies,
17 pledges dollars to assist income-qualified customers that are
18 struggling to pay their energy bill. The LIHEAP portal
19 streamlines this process by enabling LIHEAP agencies to
20 process pledges for struggling customers in a faster and more
21 efficient manner. The CPUC directed PG&E to develop the
22 LIHEAP portal through the Disconnections OIR proceeding
23 (R.18-07-005).³⁹

24 PG&E is not requesting to recover the costs associated with
25 launching the portal in this GRC. Instead, PG&E's 2023

³⁶ The pilot program was approved in Resolution E-4080, May 3, 2007, and the ongoing Cooling Center Program proposal was approved in an August 8, 2008 disposition letter approving ALs 3220-E and 3220-E-A, effective April 15, 2008.

³⁷ D.17-12-009, Attachment 1 (modifying D.16-11-022), p. 496, OP 114.

³⁸ Exhibit (PG&E-6), WP 3-26 provides 2020 recorded and 2023 forecasts costs for Cooling Centers.

³⁹ D.20-06-003, p. 151, OP 27.

forecast of \$0.06 million supports ongoing maintenance of the LIHEAP portal.⁴⁰

2. Memorandum of Understanding With the National Diversity Coalition

PG&E presents a MOU for Commission approval between PG&E and the NDC. The MOU is attached as Attachment 3A to this chapter.

The MOU includes key areas of partnership between PG&E and NDC to support diverse communities, such as leveraging new pathways for outreach and education and supporting economic opportunities for communities of color. In the MOU, the parties agree to terms that provide, among other things, that:

- PG&E will undertake a commitment to spend a total of \$3.2 million over the 4-year 2023 GRC period on the Technical Assistance Program (TAP) and report to NDC on an annual basis the amount spent supporting TAP activities including the amount of labor tracked to the TAP order;
- PG&E will confer with NDC and solicit its feedback regarding ways to increase outreach to small and micro businesses;
- PG&E will continue to invite low-income and community-of-color advocates to participate on a Customer Advisory Panel, that will occur at least twice per year and will be attended by at least one officer from PG&E's Regulatory Affairs Organization, Customer Care Organization, or External Affairs Organization;
- PG&E will host an annual meeting with NDC that is attended by at least two EVPs. In the alternative, PG&E may choose to host two meetings in a given year at which at least one EVP is in attendance at each meeting.
- The Chief Executive Officer (CEO) of PG&E Corporation will attend two of the annual meetings over the 4-year 2023 GRC period;
- PG&E will spend a total of \$800 thousand over the 4-year 2023 period towards work with CBOs. PG&E and NDC intend for there to be flexibility in the use of this funding to support CBO partnerships. As part of this work, PG&E will work with CBOs to disseminate in multiple

⁴⁰ Exhibit (PG&E-6), WP 3-27 provides 2023 forecasted costs for LIHEAP Portal Maintenance.

languages, general information about financial assistance and bill savings programs, rate options, wildfire safety-related topics and emergency preparedness or other emergent initiatives to help reach vulnerable customers. PG&E will work with NDC to help identify appropriate CBOs to include in outreach education and awareness solicitation opportunities;

- PG&E will coordinate with NDC to conduct at least two workshops or trainings per year for low-income constituents for marketing and education on PG&E's low-income and disadvantaged communities programs; and
- PG&E will establish aspirational goals of 40 percent overall and 25 percent minority spending for supplier diversity annually for the 2023-2026 GRC period and report on its annual aspirational goals for overall and minority spending for supplier diversity in the next GRC.

C. Activities, Costs, and Forecast Drivers by MWC

1. Expense MWCs

a. Pricing Products – Rate Programs and Tools

1) Rate Operations and Tools (MWC EZ)

PG&E's 2023 forecast for Rate Operations and Tools activities is \$3.7 million, which is \$0.6 million higher than 2020 recorded costs.⁴¹ The increase is due primarily to increased licensing fees for data services that support marketing campaigns.

2) Residential Rates Implementation (MWC EZ)

PG&E's 2023 forecast for Residential Rates Implementation activities is \$7.4 million, which is \$4.4 million higher than 2020 recorded costs.⁴²

The increase is due primarily to an increase in Medical Baseline education and outreach, and required annual Residential Rate Comparison communications that were previously recorded to the RRRMA.

⁴¹ Exhibit (PG&E-6), WP 3-10 to WP 3-11.

⁴² Exhibit (PG&E-6), WP 3-12 to WP 3-16.

3) Non-Residential Rates Implementation (MWC EZ)

PG&E's 2023 forecast for Non-Residential Rates Implementation is \$3.6 million, which is \$1.8 million lower than 2020 recorded costs.⁴³ This decrease is attributable to the reduction in the work that was required to transition non-residential customer to rates with new TOU periods.

b. Income-Qualified Programs

1) Natural Gas Appliance Tests (MWC GM)

PG&E's 2023 forecast for NGAT is \$7.4 million, which is \$1.7 million higher than 2020 recorded costs.⁴⁴ This increase in funding can be attributed to a five percent increase in the number of ESA homes treated, a three percent increase in the percent of ESA-treated homes receiving an NGAT, and a 10 percent increase in the contract labor cost.⁴⁵

2) Disadvantaged Communities and Community-Based Organizations Cross Coordination (MWC EZ)

PG&E's 2023 forecast for the DAC and CBO initiatives is \$0.5 million, which is \$0.45 million higher than 2020 recorded costs.⁴⁶ This increase in funding can be attributed to support for strategy development, planning and engagement with CBOs, and development of offerings to drive awareness of emerging utility programs and initiatives in DACs not funded through Public Purpose funding.

3) Cooling Centers (MWC EZ)

PG&E's 2023 forecast for Cooling Centers is \$0.16 million, which is \$0.05 million higher than 2020 recorded costs.⁴⁷ The increase in funding reflects a return to the regular anticipated costs

⁴³ Exhibit (PG&E-6), WP 3-17 to WP 3-20.

⁴⁴ Exhibit (PG&E-6), WP 3-23 to WP 3-24.

⁴⁵ *Id.*

⁴⁶ Exhibit (PG&E-6), WP 3-25.

⁴⁷ Exhibit (PG&E-6), WP 3-26.

of the cooling centers (which is baselined at \$150,000 per year) and an increase in labor costs associated with administering the cooling centers.

4) LIHEAP Portal Maintenance (MWC EZ)

PG&E's 2023 forecast for ongoing maintenance of the LIHEAP Portal is \$0.06 million.⁴⁸ This is a new funding request that includes the cost for the website hosting fees and operations and maintenance support. The portal was initially developed in 2020 and 2021, and the requested funding is for site maintenance.

D. Estimating Method

PG&E's 2023 forecast for Pricing Products and Income-Qualified Programs was developed using recorded 2020 expenses as a base. These recorded expenses were adjusted for labor and non-labor escalation, consistent with rates described in Exhibit (PG&E-8), Chapter 4 and Exhibit (PG&E-12), Chapter 3, respectively. Further adjustments were made to reflect changes in program activity as described elsewhere in this chapter.

E. Compliance with Prior Commission Decisions

1. National Diversity Coalition Stipulation

D.20-12-005 adopts a stipulation between PG&E and NDC (Stipulation) that was incorporated into the 2020 GRC Settlement Agreement.⁴⁹ PG&E provides an update on activities implemented by Pricing Products and Income-Qualified Programs in further detail below. PG&E provides additional updates on other areas of the NDC Stipulation in other exhibits and chapters. Specifically, see Exhibit (PG&E-6), Chapter 2 for more information on safety-related outreach spending, and Exhibit (PG&E-7), Chapter 4 for more information on the TAP.

a. Default TOU Transition ME&O

The NDC Stipulation states:

PG&E will have a flexible target of approximately \$200K per year with a commitment to spend a total of \$600K over the 3-year 2020

⁴⁸ Exhibit (PG&E-6), WP 3-27.

⁴⁹ D.20-12-005, pp. 327-328.

1 GRC period towards work with Community-Based Organizations.
 2 As part of this work, PG&E will work with CBOs to disseminate in
 3 multiple languages, general information pamphlets or brochures
 4 about rate options and about updating contact information or
 5 changing language preferences. PG&E will work with NDC to
 6 identify appropriate CBOs to disseminate this information.⁵⁰

7 Due to the COVID-19 pandemic and the resulting impacts to
 8 in-person activities, PG&E adjusted its strategy for engaging with CBOs
 9 on Default TOU Transition ME&O from pamphlets and brochures to a
 10 heavier volume of social media and virtual efforts. PG&E coordinated
 11 with NDC on this adjustment and spent approximately \$323,000 in 2020
 12 in support of these efforts. PG&E describes these supporting activities
 13 in further detail below:

- 14 • CBO Partnership Identification and Support –
 - 15 – PG&E spent approximately \$121,000 in 2020 to identify and
 - 16 support CBOs that were interested in providing campaigns for
 - 17 Default TOU Transition ME&O. This includes coordinating with
 - 18 NDC on the following activities:
 - 19 • Developing a comprehensive list of CBOs to contact for
 - 20 partnering on ME&O;
 - 21 • Creating an intake form that captures CBO campaign
 - 22 interest levels, regional area of operations, communities
 - 23 served, and expected tactics used;
 - 24 • Developing standardized messaging; and
 - 25 • Developing slide decks and collateral for CBOs to use that
 - 26 provide information on rate options, discount programs, and
 - 27 how to update language preferences.
- 28 • Multicultural TOU Customer Education Campaign – In 2020, PG&E
- 29 spent approximately \$165,000 on television and radio spotlights in
- 30 multicultural channels to be aired throughout 2020 and 2021 on
- 31 Default TOU Transition education; and
- 32 • In-Person Multicultural TOU Customer Education Campaign – Prior
- 33 to the COVID-19 pandemic, PG&E spent approximately \$37,000 on
- 34 supporting in-person multicultural outreach with CBOs, including:

⁵⁰ A.18-12-009 PG&E 2020 GRC, Hearing Exhibit (HE)-172: Stipulation, p. 3.

marketing material design and production, translation services, and printing and shipping collateral.

b. Executive Level Meetings

The NDC Stipulation states:

PG&E shall hold one annual meeting with NDC leadership. The Chief Executive Officer of PG&E (utility) will attend each annual meeting, along with those senior officers relevant to the agenda. In addition, the Chief Executive Officer of PG&E Corporation will attend one of the annual meetings. Participants at these meetings will discuss issues pertaining to the implementation of the provisions of this Agreement, as well as other related issues that PG&E or NDC may wish to discuss.⁵¹

PG&E held an executive level meeting with NDC on September 22, 2020. The meeting was virtual due to the COVID-19 pandemic and included the Interim President of PG&E Utility, the CEO of PG&E Corporation, and other Company Officers. During the meeting, PG&E and NDC discussed issues including regionalization, wildfire preparedness, PG&E's PSPS Program, serving vulnerable customers, and PG&E's commitment to diversity (including hiring, supplier diversity and TAP and charitable activities).

c. Customer Advisory Panels

The NDC Stipulation states that PG&E will continue to invite low-income and community of color advocates to participate on a Customer Advisory Panel. Specifically, NDC and PG&E agreed that the Customer Advisory Panel would meet in-person at least twice a year and that at least one officer from PG&E's Regulatory Affairs Organization, Customer Care Organization, or External Affairs Organization will attend each meeting.

PG&E held three Customer Advisory Panel meetings in 2020 (June 2, September 15, and December 8). During these meetings, PG&E and NDC discussed issues including PG&E's bankruptcy, regionalization, TOU community engagement, community wildfire safety, access and functional needs customer outreach, and support for small

⁵¹ A.18-12-009, PG&E 2020 GRC, HE-172: Stipulation, p. 5.

minority businesses. PG&E also hosted ad-hoc meetings with the Customer Advisory Panel members on February 11 and June 25, 2020 to provide RT updates on PG&E's bankruptcy filing and regionalization efforts. The VP of Regulatory and External Affairs attended the meetings on February 11, June 2, and September 15, along with Senior Directors who were also present at each meeting.

2. Cooling Centers

D.17-12-009 determined that Cooling Centers should be funded through PG&E's GRC.⁵² As discussed in Section C.1.b.3, PG&E 2023 forecast for Cooling Centers is \$0.16 million.⁵³

F. Balancing and Memorandum Accounts – Residential Rate Reform Memorandum Account

The Commission authorized the RRRMA in 2015 via AL 4672-E, which PG&E submitted pursuant to D.15-07-001.⁵⁴ The RRRMA was established to track costs associated with implementing residential rate reform, including TOU pilots and studies, marketing, education, and outreach, IT, and data analysis.

The Pricing Products and Income-Qualified Programs 2023 expense forecast reflects ongoing costs of residential rate reform activities that were previously recorded beginning in 2015 in the RRRMA and will continue to be recorded in the RRRMA through 2022.⁵⁵ PG&E is not requesting recovery of 2015-2022 residential rate reform costs in this GRC because the Commission has approved an alternative process for recovery in D.17-05-013 and D.20-12-005.⁵⁶ Beginning in 2023, PG&E proposes to recover the forecasted costs for rate reform activities through GRC revenues to allow for the completion

⁵² D.17-12-009, Attachment 1 (modifying D.16-11-022), OP 114.

⁵³ Exhibit (PG&E-6), WP 3-26.

⁵⁴ AL 4672-E established the RRRMA, pursuant to D.15-07-001, p. 262. AL 4672-E, filed July 22, 2015 and approved August 19, 2015.

⁵⁵ Per D.19-07-004, p. 216, OP 24, the TOU Transition began in October 2020 and will conclude 18 months later in March 2022. Final end-of-bill protection notices will be sent in March 2023.

⁵⁶ The Commission approved the recovery mechanisms for 2015-2019 rate reform costs through its approval of the joint party settlement agreement in D.17-05-013, pp. 88-91, and for 2020-2022 rate reform costs in D.20-12-005, through its approval of the joint party settlement agreement, filed in A.18-12-009 (December 20, 2019), pp. 22-24.

1 of Default TOU Transition and required ongoing annual Residential Rate
2 Comparison communications. The 2023 test year expense forecast for these
3 activities that would otherwise be recorded to the RRRMA is \$2.5 million.⁵⁷

4 **G. Cost Tables**

5 PG&E's forecast for Pricing Products and Income-Qualified Programs is
6 summarized below in Table 3-1, which shows 2016 through 2020 recorded
7 adjusted expenses and 2021 through 2023 forecast expenses by MWC.

⁵⁷ Exhibit (PG&E-6), WP 3-9 provides Pricing Products' 2020 recorded RRRMA and GRC spending by activity, compared with the 2023 GRC forecast for the same activities.

TABLE 3-1
PRICING PRODUCES AND INCOME-QUALIFIED PROGRAMS
EXPENSES BY MWC
(THOUSANDS OF NOMINAL DOLLARS)

Line No.	MWC	Project	Recorded Adjusted					Forecast			Worksheet Reference
			2016	2017	2018	2019	2020	2021	2022	2023	
1	EP	Manage Property & Bldgs	\$521	\$64	—	—	—	—	—	—	—
2	EZ	Manage Var Cust Care Processes	10,392	14,706	\$14,041	\$8,313	\$11,701	\$11,990	\$12,484	\$15,438	WP 3-10 to WP 3-18; WP 3-25 to WP 3-27
3	GM	Manage EE-NonBA	4,025	3,798	6,725	7,170	5,767	7,636	6,733	7,415	WP 3-23 to WP 3-24
4		Total	\$14,938	\$18,568	\$20,766	\$15,483	\$17,468	\$19,626	\$18,454	\$22,853	

(PG&E-6)

PACIFIC GAS AND ELECTRIC COMPANY
CHAPTER 3
ATTACHMENT A
MEMORANDUM OF UNDERSTANDING BETWEEN
NATIONAL DIVERSITY COALITION AND
PACIFIC GAS AND ELECTRIC COMPANY

**MEMORANDUM OF UNDERSTANDING BETWEEN
NATIONAL DIVERSITY COALITION AND PACIFIC GAS
AND ELECTRIC COMPANY ON SUPPORT FOR
COMMUNITIES OF COLOR AND UNDERSERVED
COMMUNITIES**

The National Diversity Coalition (NDC) and Pacific Gas and Electric Company (PG&E) (collectively, the Parties) hereby enter into this Memorandum of Understanding (MOU) pertaining to the revenue requirement phase of PG&E's upcoming test year 2023 General Rate Case (GRC).

ARTICLE 1

RECITALS

1.1 On or about June 30, 2021, PG&E will file its 2023 GRC application, which will address electric distribution, gas distribution, and electric generation rates for the years 2023 through 2026.

1.2 NDC is an advocacy-oriented organization of community-based, faith-based, and non-profit leaders working collectively for greater financial equality and economic empowerment for underserved communities. NDC intends to participate as an intervenor in PG&E's 2023 GRC.

1.3 PG&E provides electricity and gas service to much of northern and central California. PG&E provides a number of services, programs and support for communities of color and underserved communities.

1.4 In PG&E's 2017 GRC, NDC and PG&E joined an all- -party settlement agreement, which, among other things, addresses issues related to communities of color and underserved communities for 2017 through 2019. The settlement agreement was approved by the California Public Utilities Commission (Commission) in its Decision 15-09-001.

1.5 In PG&E's 2020 GRC, NDC and PG&E joined a multi-party settlement agreement that was approved by the California Public Utilities Commission (Commission) in its Decision 20-12-005. The settlement incorporated a stipulation between NDC and PG&E addressing issues related to communities of color and underserved communities for 2020 through 2022 (2020 Stipulation).

1.6 The Parties value their longstanding, collaborative relationship in delivering programs and supporting the needs of underserved communities including communities of color and have worked collaboratively to implement the 2020 Stipulation. As an outgrowth of that collaboration, the Parties commenced discussions of matters of common interest for the years 2023-2026 (2023 GRC Period). These discussions led to the current MOU.

ARTICLE 2

TERMS

2.1 Technical Assistance Program (TAP)

2.1.1 PG&E will spend the equivalent of \$0.8 million per year, for a total of \$3.2 million over the 4-year, 2023 GRC Period, consistent with the annual spending the Commission approved in Decision 20-12-005 for the years 2020 through 2022 (2020 GRC Period). The Parties agree that this amount is reasonable to continue to support the development of minority businesses, and request that the Commission approve an \$0.8 million annual forecast for TAP for the 2023 GRC Period in the approved revenue requirement.

2.1.2 If the Commission adopts an amount lower than \$0.8 million annually for TAP for the 2023 GRC Period, PG&E's spending commitment described in 2.1.1 shall be the amount the Commission adopts.

2.1.3 The spending commitment described in Section 2.1.1 will include external costs and PG&E internal labor in support of the TAP.

2.1.4 All costs applied to the spending commitment will be tracked directly to the TAP order.

2.1.5 PG&E will report to NDC on an annual basis, the amount spent supporting TAP activities including the amount of labor tracked to the TAP order.

2.1.6 PG&E will confer with NDC and solicit its feedback regarding ways to increase outreach to small and micro businesses.

2.1.7 The 2020 Stipulation includes a total spending commitment for PG&E of \$2.4 million over the 3-year period from 2020 through 2022 (i.e. the equivalent of \$0.8 million annually). Should PG&E spend less than \$2.4 million in total over the 2020 GRC Period, PG&E will refund any underspend to customers through an appropriate regulatory mechanism.

2.2 Customer Advisory Panels

2.2.1 PG&E shall continue to invite low-income and community-of-color advocates to participate on a Customer Advisory Panel. The scope of the advisory panel will include ongoing guidance relating to PG&E's overall outreach efforts, including but not limited to: (1) providing input on new and existing programs, agreeing on the charter for the advisory panel and tracking progress on effectiveness of advisory group; (2) providing progress updates on projects affecting minority communities, including the TAP, and Marketing, Education and Outreach to minority communities; (3) working with NDC members to identify non-profit Community-Based Organization (CBO) partner organization and minority businesses to participate in PG&E programs; (4) discussing how to provide practical resources, that will help

small minority businesses grow; and (5) ongoing dialogue about safety education and effective communications with communities of color.

2.2.2 Meetings of the Customer Advisory Panel will occur at least twice a year, which may be in-person or remote. NDC will be compensated for reasonable meeting expenses.

2.2.3 To increase the awareness and responsiveness of PG&E executive leadership to issues of concern in communities of color, PG&E and NDC agree that at least one officer from PG&E's Regulatory Affairs Organization, Customer Care Organization or External Affairs Organization will be present at each meeting of the Customer Advisory Panel.

2.2.4 To the extent any PG&E organizational changes occur during the 2023 GRC Period that affect the attendees or organizations specified in Section 2.2, PG&E will confer with NDC and make a good faith effort to identify the equivalent attendees and organizations to participate in the Customer Advisory Panels.

2.3 Executive Level Meetings

2.3.1 NDC and PG&E value a cooperative working relationship between PG&E executives and community leaders. In order to further strengthen and develop that relationship, PG&E will host an annual meeting at which at least two Executive Vice Presidents will be in attendance along with those senior officers relevant to the agenda. In the alternative, PG&E may choose to host two meetings in a given year at which at least one Executive Vice President is in attendance at each meeting along with those senior officers relevant to the agenda.

2.3.2 The Chief Executive Officer of PG&E Corporation will attend two of the annual meetings over the 2023 GRC Period.

2.3.3 Participants at these meetings will discuss issues pertaining to the implementation of the provisions of this MOU, as well as other related issues that PG&E or

NDC may wish to discuss. Representatives of NDC and of PG&E's Customer Care or Regulatory Affairs organizations will work together to prepare an agenda in advance of the meeting. This meeting is separate from the Customer Advisory Panel meetings described above. NDC will be compensated for reasonable meeting expenses.

2.3.4 To the extent any PG&E organizational changes occur during the 2023 GRC Period that affect the attendees or organizations specified in Section 2.3, PG&E will confer with NDC and make a good faith effort to identify the equivalent attendees and organizations to participate in the Executive Level Meetings.

2.4 Community Based Organizations

PG&E will spend the equivalent of \$0.2 million per year, for a total of \$0.8 million over the 4-year 2023 GRC Period (2023-2026), towards work with CBOs. The Parties intend for there to be flexibility in the use of this funding to support CBO partnerships. As part of this work, PG&E will work with CBOs to disseminate in multiple languages, general information about financial assistance and bill savings programs, rate options, wildfire safety-related topics and emergency preparedness or other emergent initiatives to help reach vulnerable customers. PG&E will work with NDC to help identify appropriate CBOs to include in outreach education and awareness solicitation opportunities.

2.5 Marketing and Outreach

2.5.1 PG&E will work with NDC regarding the marketing and outreach of its existing Income Qualified Bill Assistance programs, as well as programs introduced for providing assistance during COVID-19 to the extent they are still ongoing.

2.5.2 PG&E will work with NDC to conduct at least two workshops or trainings per year for the low-income constituents regarding marketing and education of PG&E's Low Income and Disadvantaged Communities Programs.

2.6 Supplier Diversity Aspirational Goals

2.6.1 PG&E is committed to incorporating supplier diversity into its procurement process. For the 2023 GRC period, PG&E agrees to an annual aspirational supplier diversity spending goal for procurement of goods and services of 40% to the combined group of the following business enterprises - woman (WBE), minority (MBE), service-disabled veteran (DVBE), and lesbian, gay, bisexual and transgender (LGBTBE) business enterprises, collectively referred to as (WMDVLGBTBE). Of this amount, PG&E agrees to an annual aspirational goal of 25% for minority business enterprises (MBE).

2.6.2 PG&E will establish and report in the next GRC, annual aspirational goals for supplier diversity spending in categories consistent with those described in Section 2.6.1.

2.6.3 PG&E will continue to explore potential additional ways to support small and diverse businesses in its service area. NDC may provide recommendations any on this topic to PG&E for discussion and further exploration.

ARTICLE 3

TERM AND GENERAL PROVISIONS

3.1 Term and Effectiveness: This MOU shall only become enforceable upon the Commission's issuance of a final decision in PG&E's 2023 GRC that specifically approves and funds the provisions of this MOU. The commitments in this MOU shall then remain effective

for four years or until the Commission issues a final decision in PG&E's subsequent GRC, whichever is earlier.

3.2 Non-Precedential: The Parties agree that this MOU is non-precedential.

3.3 Joint Support: The Parties shall jointly request Commission approval of this MOU.

3.4 Entire Agreement: This MOU represents the entire understanding and agreement of the Parties with respect to the matters described herein, and, except as described herein, supersedes and cancels any and all prior oral or written agreements, principles, negotiations, statements, representations, or understandings among the Parties pertaining to these matters.

3.5 Resolution of Issues: The Parties agree that this MOU addresses all issues NDC has historically raised in the revenue requirement phase of parties' General Rate Cases. NDC may participate in PG&E's 2023 GRC by submitting testimony, participating in settlement discussions, evidentiary proceedings or otherwise, consistent with the terms of this MOU.

3.6 Amendment: The MOU may be amended or changed only by a written agreement signed by the Parties.

3.7 Counterparts: This MOU may be executed in counterparts, each of which shall be deemed an original, but all of which together shall constitute one and the same instrument.

3.8 Unified, Integrated Agreement: The Parties agree that if the Commission fails to adopt this MOU in its entirety and without modification, the Parties shall meet and confer within 15 days thereof to discuss whether they can resolve the issues raised by the Commission's actions. If the Parties cannot mutually agree to resolve the issues raised by the Commission's actions, the MOU shall be rescinded, and the Parties shall be released from their obligation to support the MOU. Thereafter, the Parties may pursue any action they deem appropriate, but

agree to cooperate in establishing a procedural schedule. Parties reserve all rights set forth in Rule 12.4 of the Rules of Practice and Procedure.

In Witness Whereof, intending to be legally bound, the undersigned have duly executed this Agreement on behalf of the parties they represent.

NATIONAL DIVERSITY COALITION	PACIFIC GAS AND ELECTRIC COMPANY
By: _____	By:  _____
Name: _____ Faith Bautista Chief Executive Officer	Name: _____ Aaron August Vice President, Business Development & Customer Engagement
Date: June 18, 2021	Date: June 18, 2021

agree to cooperate in establishing a procedural schedule. Parties reserve all rights set forth in Rule 12.4 of the Rules of Practice and Procedure.

In Witness Whereof, intending to be legally bound, the undersigned have duly executed this Agreement on behalf of the parties they represent.

NATIONAL DIVERSITY COALITION	PACIFIC GAS AND ELECTRIC COMPANY
By: <u>Faith Bautista</u>	By: _____
Name: _____ Faith Bautista Chief Executive Officer	Name: _____ Aaron August Vice President, Business Development & Customer Engagement
Date: June 18, 2021	Date: June , 2021

PACIFIC GAS AND ELECTRIC COMPANY
CHAPTER 4
CONTACT CENTERS, CUSTOMER TECHNOLOGY, AND
DIGITAL STRATEGY
[INCLUDES NOVEMBER 5, 2021 ERRATA]

PACIFIC GAS AND ELECTRIC COMPANY
CHAPTER 4
CONTACT CENTERS, CUSTOMER TECHNOLOGY, AND DIGITAL STRATEGY

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PACIFIC GAS AND ELECTRIC COMPANY
CHAPTER 4
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PACIFIC GAS AND ELECTRIC COMPANY
CHAPTER 4
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PACIFIC GAS AND ELECTRIC COMPANY
CHAPTER 4
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PACIFIC GAS AND ELECTRIC COMPANY
CHAPTER 4
CONTACT CENTERS, CUSTOMER TECHNOLOGY, AND DIGITAL
STRATEGY

A. Introduction

1. Scope and Purpose

This chapter demonstrates that Pacific Gas and Electric Company's (PG&E) expense and capital forecasts for management and operation of its contact centers, Customer Care Technology, and Digital Strategy teams are reasonable and should be approved.

- Contact Center Operations (CCO) provides timely and responsive support to PG&E's customers for emergencies, payment inquiries, technical questions, and energy-related services and programs. CCO includes PG&E's three contact centers and its Workforce Management (WFM) group.
- Customer Care Technology¹ develops long-term technology strategies to support Customer Care, monitors and supports Information Technology (IT) implementations, and provides project leadership.
- Digital Strategy oversees PG&E's web, customer notifications and mobile channels and is responsible for providing effective communication and self-service tools for customers for everyday needs and during emergencies.

PG&E's forecast for managing and operating CCO, Customer Care Technology, and Digital Strategy teams will enable PG&E to maintain its current level of service and continue to provide necessary customer support as described in this chapter.

This chapter also describes PG&E's proposed cost allocation method of customer care expenses, as required in Decision (D.) 20-12-005. See Section E for PG&E's detailed cost allocation method and supporting data.

¹ Customer Care Technology is a new department. For more detail, please see Section B.1.b.

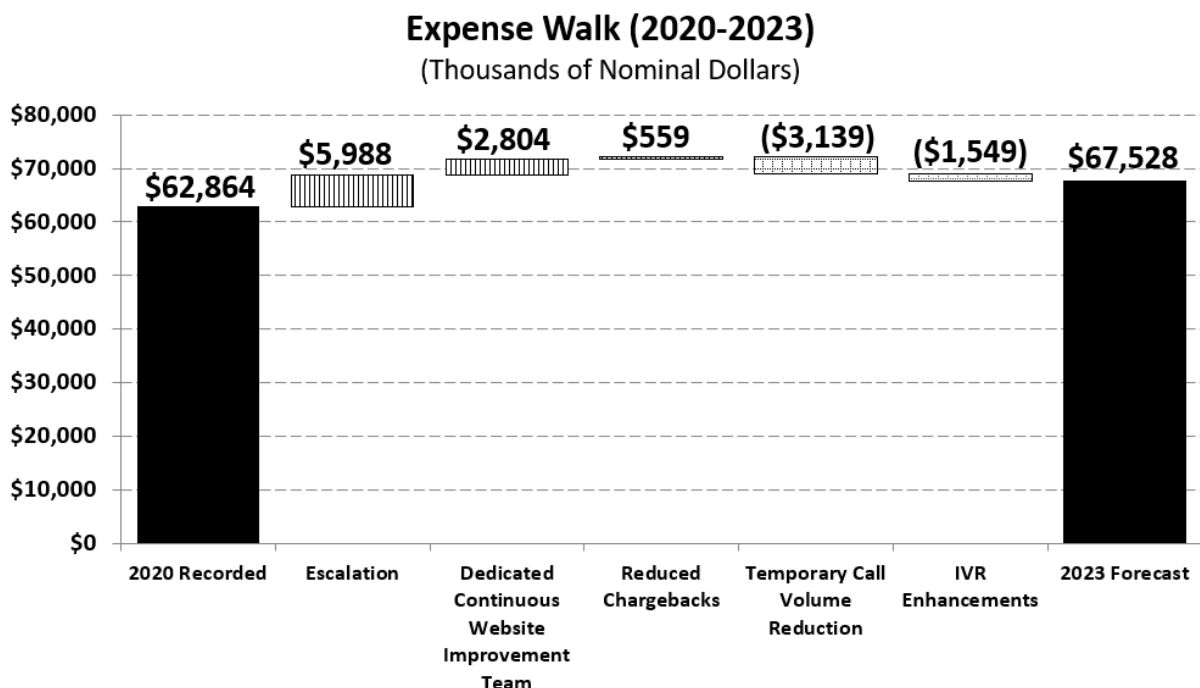
2. Summary of Request

PG&E requests approval of its 2023 expense forecast of \$67.5 million for operation of its contact centers, Customer Care Technology, and Digital Strategy teams. This expense forecast is \$4.7 million (7.4 percent) higher than 2020 recorded costs. The major drivers of the increase are \$6.0 million due to escalation, \$2.8 million due to a new dedicated continuous website improvement team, and \$0.6 million for Digital Strategy and Customer Care Technology's reduced chargebacks to other departments. These increases were offset by a \$3.1 million reduction due to temporarily reduced call volumes associated with PG&E's service disconnection moratorium between 2020-2021 and a \$1.5 million reduction due to enhancements to Interactive Voice Response (IVR) functionality.

3. Overview of Recorded and Forecast Costs

Figure 4-1 below shows the difference between PG&E's 2020 recorded expense costs and its 2023 forecast, including cost drivers.

FIGURE 4-1
CONTACT CENTERS, CUSTOMER TECHNOLOGY, AND DIGITAL STRATEGY EXPENSE WALK
(2020-2023)
(THOUSANDS OF NOMINAL DOLLARS)



4. Support for Request

PG&E's CCO forecast is reasonable because PG&E:

- Ensures that the contact centers provide timely and responsive telephone, e-mail and other related services to PG&E's customers;
- Improves customer service by coordinating traditional Customer Service Representative (CSR) activities with complementary technological innovation to provide timely and efficient service to PG&E's customers;
- Uses industry benchmarking data to identify and focus on opportunities for call-handling process improvements and expansion of customer contact options; and
- Manages the expenses for CCO-related activities efficiently using a WFM group dedicated to forecasting, scheduling, planning, reporting, and call routing for all three contact centers.

PG&E's Customer Care Technology forecast is reasonable because PG&E:

- Ensures the most critical regulatory, safety, and efficiency efforts for Customer Care are funded and implemented; and
- Ensures the proper methodologies and governance processes are being used within Customer Care technology efforts.

PG&E's Digital Strategy forecast is reasonable because PG&E:

- Enables customers to conduct self-service for a variety of transactions in a manner they prefer while at a lower cost than other channels; and
- Ensures that its core digital systems and platforms remain reliable and secure.

5. Organization of the Remainder of This Chapter

The remainder of this chapter is organized as follows:

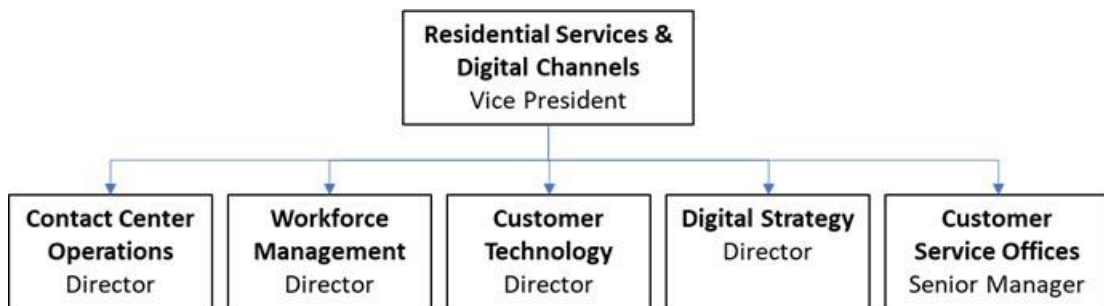
- Section B – Program Overview
- Section C – Activities, Costs, and Forecast Drivers by Major Work Category (MWC)
- Section D – Estimating Method
- Section E – Compliance with Prior California Public Utilities Commission (CPUC or Commission) Decisions
- Section F – Cost Tables

B. Program Overview

1. Management Structure

In March 2020, Customer Care restructured the Customer Service Operations and Support organization to create the Residential Services and Digital Channels organization to deliver an improved, more efficient use of support staff and resources. With the change, Customer Care eliminated a Senior Director position and moved the Directors of CCO, WFM, Customer Care Technology, Digital Strategy, and the Senior Manager of Customer Service Offices (CSO) to report directly to the Vice President of Residential Services and Digital Channels. This organizational structure is shown in Figure 4-2 below.²

**FIGURE 4-2
CONTACT CENTERS, CUSTOMER TECHNOLOGY, AND DIGITAL STRATEGY
ORGANIZATIONAL STRUCTURE**



2. Program Description

a. Contact Center Operations

Collectively, CCO employees respond to approximately 6.4 million customer inquiries annually for service, information, and assistance.³ CCO also responds to customer e-mails received through PG&E's website.⁴ PG&E's ability to respond to inquiries in a timely manner is key to PG&E's commitment to make public safety a top priority and to

² CSOs are covered in Exhibit (PG&E-6), Ch. 5.

³ Based on an average of 2017-2020 handled calls. See Exhibit (PG&E-6), WP 4-5, for contact center call statistics.

⁴ Exhibit (PG&E-6), WP 4-12, for the number of e-mails completed by year.

meet the overall service needs of its customers.⁵ Examples of common customer interaction topics include:

- Start service;
- Stop or transfer service;
- Make payments;
- Make pay plans;
- Report an outage;
- Inquire about billing or rates; and
- Inquire about services or programs.

CCO responds to customer calls using a combination of live agents (CSRs) and automated systems that use voice response technology.

CCO employs approximately 747 CSRs (based on 2020 average monthly CSR headcount),⁶ who work in contact centers located in Fresno and Sacramento, which has two centers. PG&E provides multi-lingual support to customers in 246 languages.⁷

b. Customer Care Technology

Customer Care's Customer Care Technology Team was created during the reorganization discussed in Section B.1. above. The team is a centralized technology enablement team driving Customer Care's technology needs. This team is responsible for developing application roadmaps, supporting and monitoring IT implementations, and providing application support on critical Customer Care platforms.⁸ Customer Care Technology provides project sponsorship and governance to many key initiatives within Customer Care that require technology.

The Customer Care Technology Team works closely with IT developing multi-year product roadmaps accounting for application/platform lifecycle needs as well as emerging technology

⁵ Exhibit (PG&E-6), WP 4-6, for more information on CCO telephone service levels by year.

⁶ Exhibit (PG&E-6), WP 4-7, line 5.

⁷ Exhibit (PG&E-6), WP 4-10, for a list of available languages from Language Line Services.

⁸ An example of this is our Energy Insights platform within Salesforce, which is used by several different Customer Care areas including Enterprise Account Management and Pricing Products.

opportunities. The team is charged with managing PG&E's annual IT prioritization process for Customer Care to ensure the most critical regulatory, safety, and efficiency requests are funded and implemented. This team also oversees minor IT enhancements and facilitates new requests that arise in the calendar year.

Corporate initiatives related to IT systems affecting Customer Care are also centrally supported within this team. As PG&E matures its data management and data governance processes, the Customer Care Technology Team is leading this effort within Customer Care. Another corporate initiative championed by this team involves IT's shift to Scaled Agile Framework implementation methodology for IT projects.

c. **Digital Strategy**

Digital Strategy provides expertise in copywriting, project management, digital communication strategy, web design, optimization testing, and content publishing. Team members are also responsible for web analytics, online feedback, future functionality, and day-to-day oversight of self-service features.

Digital Strategy manages four core digital systems and platforms:

- **PGE.com Website** – A core digital asset, the PGE.com website provides customers with information on safety, outages, pricing, energy efficiency, service options, and demand side management programs including energy efficiency. In 2020, PGE.com⁹ received more than 48.1 million site visits.¹⁰
- **Your Account** – “Your Account” is the logged-in, transaction area of PG&E's website. It provides customers with a variety of digital self-service options, such as account billing and payment options, alerts and notifications, energy usage and diagnostics, rate comparisons and user profile management. The site handled an average of 4.0 million transactions per month in 2020.
- **Emergency Communications** – As part of PG&E's core web properties, Digital Strategy also manages and maintains a website

⁹ This includes all domains (pge.com, mobile site, and Emergency Web).

¹⁰ Exhibit (PG&E-6), WP 4-26, for PGE.com website statistics.

dedicated to safety and alerts for customers. This site is hosted by outside vendors and was designed for scalability and resiliency if PGE.com is not available due to a major event. It is a standalone system designed for speed and flexibility in publishing.

- **Notifications** – The Digital Strategy team also oversees platforms used to notify customers via text, email, and phone. These platforms are used for everyday outages and alerts around usage, as well as during emergency situations such as Public Safety Power Shutoffs (PSPS).

C. Activities, Costs, and Forecast Drivers by Expense MWC

1. MWC DK: Manage Customer Inquiries

a. Costs

MWC DK includes all general expenses associated with CCO and WFM.

b. Forecast Drivers

1) Escalation

PG&E forecasts \$5.6 million of labor escalation and \$0.1 million of non-labor escalation for CCO between 2020 and 2023.¹¹ This forecast is based on the labor escalation rates discussed in Exhibit (PG&E-8) Chapter 4 and non-labor escalation rates in Exhibit (PG&E-12), Chapter 3.

2) Temporary Call Volume Reduction

In March 2020, PG&E implemented a moratorium on service disconnections for non-payment. Given that service disconnection-related calls represent a significant proportion of calls received by CCO's contact centers, this moratorium reduced forecasted call volumes by as much as 20 percent in some months.¹² Because PG&E forecasts continued reduced call volumes while the moratorium continues throughout the first half of

¹¹ Exhibit (PG&E-6), WP 4-13, lines 1-2, for CCO escalation detail.

¹² Exhibit (PG&E-6), WP 4-5, for 2020 call statistics.

2021, hiring new CSRs to replace those who left through attrition was delayed, which resulted in a temporary headcount reduction and reduced labor cost of \$3.1 million in 2021.¹³

3) Interactive Voice Response Enhancements

PG&E conducts ongoing routine enhancements to the IVR. Enhancements slated for implementation include streamlining the process customers use to pay by phone, adding functionality for planned outage transactions, and, creating IVR menus for customer calls to PG&E's Credit department. PG&E forecasts these enhancements to achieve a \$1.5 million expense savings starting in 2023.¹⁴

2. MWC EZ: Manage Var Cust Care Processes

a. Costs

MWC EZ includes all general expenses associated with Customer Care Technology and Digital Strategy.

b. Forecast Drivers

1) Escalation

PG&E forecasts \$0.2 million of labor escalation and \$0.1 million of non-labor escalation for Customer Care Technology and Digital Strategy between 2020 and 2023.¹⁵ This forecast is based on the labor escalation rates discussed in Exhibit (PG&E-8), Chapter 4 and non-labor escalation rates in Exhibit (PG&E-12), Chapter 3.

2) Dedicated Continuous Website Improvement Team

PG&E has traditionally conducted ongoing enhancements to its websites through distinct projects, each with an individual scope and timeline. Once these projects were completed, their project teams would be disbanded and assigned to new projects. A drawback of this individualized project approach is that in order to further refine

¹³ Exhibit (PG&E-6), WP 4-14, for details of avoided labor hours due to hiring delay.

¹⁴ Exhibit (PG&E-6), WP 4-15, for IVR enhancement details.

¹⁵ Exhibit (PG&E-6), WP 4-13, lines 3-6, for Customer Care Technology and Digital Strategy escalation detail.

or improve the implemented functionality, a new separate project would be required. Then, after the new project is prioritized, new resources would be assigned, each requiring time to ramp up to learn about the previously implemented functionality.

In order reduce the time between improvement projects, while eliminating the ramp up time needed to acquire knowledge on existing website functionality, PG&E proposes to instead use an ongoing project team of dedicated resources that will focus on continuous improvement to PG&E's websites. PG&E forecasts an increased cost of \$2.8 million between 2020 and 2023.¹⁶

3) Reduced Chargebacks to Other PG&E Departments

A portion of Customer Care Technology's and Digital Strategy's work has been traditionally charged back to other PG&E departments for whom they have completed work. To simplify budgeting, going forward, the costs for this work will now be moved to Customer Care Technology Digital Strategy's budgets and will not be charged back. These costs represent an increased cost of \$0.6 million between 2020 and 2023.

D. Estimating Method

PG&E's 2023 CCO expense forecast was developed using recorded 2020 expenses as a base. These recorded adjusted expenses were adjusted for labor and non-labor escalation, consistent with escalation rates described in Exhibit (PG&E-8), Chapter 4 and Exhibit (PG&E-12) Chapter 3, respectively. Further adjustments were made to reflect changes in program activity, as well as any anticipated savings, as described elsewhere in this chapter.

E. Compliance with Prior Commission Decisions: Customer Care Cost Allocations

D.20-12-005 in PG&E's 2020 General Rate Case (GRC) requires PG&E to "track and report data showing the extent to which its customer care services and programs support its electric generation (EG) function as compared to its

¹⁶ Exhibit (PG&E-6), WP 4-29, Exhibit (PG&E-6) for Continuous Website Improvement Team details.

electric distribution and gas distribution functions and include this data to support its proposed cost allocation method of customer care expenses.”¹⁷

PG&E’s allocation of expenses for Customer Care services and programs among its EG, electric distribution, and gas distribution functions is described in two parts below.¹⁸ The first part details the proposed cost allocation methodology, which contains: (1) a review of the background for Customer Care cost allocation, (2) the process used to gather and categorize Customer Care services and programs, (3) the methodologies used to assess the categories and calculate allocations, and (4) a discussion of the results. The second part contains detailed allocation recommendations for each Customer Care MWC, organized according to their Exhibit (PG&E-6) chapter number and title (Chapters 2-10 only).¹⁹ Note that all references to “chapters” in this section relate to Exhibit (PG&E-6).

Based on detailed analysis of its 2020 Customer Care costs and activities, PG&E proposes to continue to allocate Customer Care costs following the principle of cost causation, which allocates costs to the group of customers that incur the costs. Specifically, PG&E proposes that costs associated with MWCs that directly support electric generation, electric distribution or gas distribution customers will be allocated 100 percent to these functions, respectively. For all other MWCs, PG&E proposes to continue to allocate 55 percent of customer costs to Electric Distribution and 45 percent to Gas Distribution, which is based on the total number of PG&E electric and gas service agreements. The vast majority of Customer Care’s work supports PG&E’s electric and gas distribution functions, with very little devoted to PG&E’s electric generation function.²⁰ For

¹⁷ D.20-12-005, pp. 414-415, Ordering Paragraph (OP) 18.b.

¹⁸ Customer Care capital cost allocations are covered in Exhibit (PG&E-10), Ch. 10 (Electric, Gas and Common Plant).

¹⁹ The cost allocation recommendations for Exhibit (PG&E-6), Ch. 1A (Regional Vice Presidents) will follow those developed for MWC-OM and be assigned a 55 percent Electric Distribution/45 percent Gas Distribution split, given that the regional Vice President leadership structure is new and has no historic costs by which to develop recommendations. PG&E has not developed cost allocation recommendations for Ch. 11 (Communications) as communication costs are not considered a Customer Care service or program.

²⁰ Exhibit (PG&E-6), WP 4-18, line 40, for Customer Care’s overall allocation percentages.

these reasons, PG&E recommends Commission adopt this cost allocation as it is the most efficacious and reasonable approach, as detailed below.²¹

1. Cost Allocation Methodology

a. Background

1) Bundled and Unbundled Customers

In discussing PG&E's utility functions (e.g., EG, electric distribution, and gas distribution), it is first important to define customer types such "bundled" and "unbundled." As illustrated in Table 4-1 below, both bundled and unbundled customers receive electric or gas distribution services from PG&E. A bundled customer has their EG or gas supply provided by PG&E, while an unbundled customer receives their electric or gas supply from suppliers other than PG&E. Unbundled electric customers are supplied by Electric Service Providers (ESP) such as Community Choice Aggregators (CCA) and Direct Access, while unbundled gas customers are supplied by Core Transport Agents (CTA).

**TABLE 4-1
CROSSWALK OF BUNDLED/UNBUNDLED CUSTOMER TYPES AND
COMMODITY SUPPLIER**

Line No.	Bundled/Unbundled Customer	EG Supplier	Electric Distribution Provider	Gas Supplier	Gas Distribution Provider
1	Electric Bundled Customer	PG&E	PG&E	N/A	N/A
2	Electric Unbundled Customer	ESP	PG&E	N/A	N/A
3	Gas Bundled Customer	N/A	N/A	PG&E	PG&E
4	Gas Unbundled Customer	N/A	N/A	CTA	PG&E

²¹ Exhibit (PG&E-6), WP 4-18, lines 1-38 for PG&E's proposed cost allocation by MWC. WP 4-18 also identifies instances where the proposed 2023 GRC cost allocation does not align to their corresponding 2020 GRC cost allocation used in the Results of Operations (RO) Model provided to the Public Advocates Office at the time of filing. The RO will be updated to incorporate these errata with the Joint Comparison Exhibit submittal.

2) A PG&E Electric or Gas Customer Is Always a Distribution Customer Though It May or May Not Be a Generation Customer Depending on Whether Its Commodity Is From a Different Supplier.

a) Basis for Cost Allocation

As outlined in D.20-12-005, PG&E uses the cost causation principle as a basis for PG&E's recommended cost allocations. Using this principle, PG&E assigns the costs of Customer Care services and programs to the customers on whose behalf PG&E incurred those costs (e.g., EG customers, electric distribution customers, etc.).²² The Commission provided details of this principle in a discussion of demand response programs:

We find it equally reasonable that tariffs and programs, including pilots, available to all customers should be paid for by all customers. Thus, we adopt as a demand response cost allocation principle that any demand response program or tariff, including a pilot, that is available to all customers shall be paid for by all customers and therefore allocated to distribution rates. Likewise, if a program or tariff is only available to bundled customers, that program's costs shall be allocated solely to generation rates.²³

With this principle in mind, PG&E allocates the cost of a given Customer Care service or program to the customers to whom the program is available. For example, the costs associated with a service that is available to any PG&E electric distribution customer would be allocated to PG&E electric distribution, while a service only available to PG&E EG customers would be allocated to PG&E EG.²⁴ Therefore, PG&E allocates its costs consistent with program availability (see Table 4-2 below).

²² D.20-12-005, p. 314.

²³ D.14-12-024, p. 48.

²⁴ It is important to note that while some programs or services may both involve generation and distribution (for example, in the case of an electric customer's bill, both EG and distribution charges are included on the bill), given these services are available to all electric and all gas customers, regardless of the customers' energy supplier, these costs are appropriately allocated to distribution.

TABLE 4-2
CROSSWALK OF PG&E CUSTOMER CARE COSTS BY
CUSTOMER TYPE AVAILABILITY AND UTILITY FUNCTIONS

Line No.	Bundled/Unbundled Customer	For Services Available to			
		<i>PG&E EG Customers</i>	<i>PG&E Electric Distribution Customers</i>	<i>PG&E Gas Supply Customers</i>	<i>PG&E Gas Distribution Customers</i>
1	Electric Bundled Customer	Costs Included in PG&E EG Function	Costs Included in PG&E Electric Distribution Function	N/A	N/A
2	Electric Unbundled Customer	N/A	Costs Included in PG&E Electric Distribution Function	N/A	N/A
3	Gas Bundled Customer	N/A	N/A	Costs Included in Separate Proceeding (Not included in GRC)	Costs Included in PG&E Gas Distribution Function
4	Gas Unbundled Customer	N/A	N/A	N/A	Costs Included in PG&E Gas Distribution Function

b. Gather and Categorize Customer Care Programs and Services

To determine the availability of a program for cost allocation purposes, PG&E conducted a review of each of Customer Care's 30 MWCs. As some MWCs contained more than one area of focus, it was necessary to further break out the MWCs based on their individual department or program, resulting in 38 MWC/department/program combinations. An example of this is Chapter 2's MWC EZ (Manage Var Cust Care Processes). Because MWC EZ includes both Distributed Generation and Customer Data Tools programs, it was necessary to split these out into two "MWC combinations" to analyze them separately.

During the review, each combination was categorized according to whether it was available to PG&E EG customers, PG&E electric distribution customers, and/or PG&E gas distribution customers.²⁵

²⁵ Exhibit (PG&E-6), WP 4-17, for the complete list of MWC/department/program combinations along with their customer availability.

To better organize and make sense of the results, the MWC combinations that had similar customer availability were grouped together, resulting in 6 different categories:

1) Category 1 – 14 MWC Combinations Available to 1 PG&E Customer Type

An example of this is the work under Chapter 9 (AMI Gas Module Mass Replacement), which is devoted solely to supporting the replacement of gas communication modules. Given this focus on gas meters, the combinations under this chapter are only applicable to gas distribution customers.

2) Category 2 – 12 MWC Combinations Available to 2 PG&E Customer Types (Electric and Gas Distribution)

An example of this is the MWC combinations under Chapter 6 (Billing, Revenue, and Credit [BRC]). The focus of this work is to issue customer bills and notices, process customer payments, conduct credit and collection operational activities, and provide revenue reporting, which are all available to both gas and electric distribution customers.

3) Category 3 – 5 MWC Combinations Available to All 3 PG&E Customer Types

Unlike the programs and services in the first two categories, which tend to have a specific subject area focus (like replacing gas meter modules or issuing customer bills), these MWC combinations involved direct customer interaction on a wide range of subject areas. For example, Chapter 4's Contact Centers (MWC DK – Manage Customer Inquiries) provide support related to a variety of utility functions through handling incoming customer inquiries (primarily via phone calls). Given customer inquiries can involve a broad variety of subjects pertinent to electric and gas distribution customers and EG customers, Contact Center support is available to all three customer types.

4) Category 4 – 5 MWC Combinations Indirectly Available to All 3 PG&E Customer Types

Unlike all the combinations above, these back-office activities do not directly provide customer service, but instead provide behind-the-scenes support to a variety of other customer service activities. For example, Chapter 4's Customer Care Technology team (MWC EZ – Manage Var Customer Care Processes) implements technology projects for various Customer Care departments. This team provides indirect support to the customers of the departments for whom it implements projects. Given the team could implement projects for many different departments (each supporting various customer types), which varies over time, it was assumed that these MWC combinations provide indirect support for all three customer types (electric distribution customers, gas distribution customers, and EG customers).

5) Category 5 – 1 MWC Combination Available to 0 PG&E Customer Types

Chapter 2's Local Customer Experience (LCE) – Third-Party Relations (MWC IV – Provide Account Services) is unique in that its focus is on establishing and managing PG&E's business relationships with ESPs and CTAs. In this case, these services wouldn't be available to any PG&E generation or distribution customers. Instead, they are solely available to ESP and CTA generation customers.

6) Category 6 – 1 MWC Combination Indirectly Available to 2 PG&E Customer Types (Electric and Gas Distribution)

Chapter 2's Non-Tariffed Products and Services (MWC EL – Develop New Revenue) is unique in that its focus is in providing indirect financial benefits to PG&E customers. It does this by using PG&E's existing electric and gas assets to generate revenue, which reduces service costs and rates available to PG&E electric distribution and PG&E gas distribution customers.

1 **c. Methodology**

2 Next, these six customer availability categories were considered
 3 individually, and a corresponding cost allocation methodology was
 4 created for each.²⁶

5 **1) Category 1 – MWC Combinations Available to 1 PG&E**

6 **Customer Type**

7 These MWC combinations' costs were direct-assigned
 8 according to their customer availability (as outlined in Table 4-2
 9 above). For example, Chapter 7's MWC EY (Change/Maint Used
 10 Elec Meter) is available only to PG&E electric distribution
 11 customers; therefore, PG&E will allocate 100 percent of those costs
 12 to PG&E electric distribution. In this way, costs are allocated to the
 13 set of customers on whose behalf PG&E incurs the costs of these
 14 programs (see Table 4-3 below).

²⁶ See Section E.2. for details on recommended allocations for each MWC combination.

**TABLE 4-3
ALLOCATIONS FOR CATEGORY 1 MWC COMBINATIONS**

Line No.	Customer Availability Category #	Chapter	MWC	MWC Description	Department/ Program	Allocation
1	1	2	IG	Manage Var Balancing Account (BA) Processes	PSPS Planning and Preparedness	100 percent Electric Distribution
2	1	2	EZ	Manage Var Cust Care Processes	Distributed Generation	100 percent Electric Distribution
3	1	2	EZ	Manage Var Cust Care Processes	Customer Data Tools	100 percent Electric Distribution
4	1	2	GM	Manage Energy Efficiency-NonBA	Clean Energy Transportation	100 percent Electric Distribution
5	1	2	CG	CAT Balancing Account	Clean Energy Transportation	100 percent Electric Distribution
6	1	3	EZ	Manage Var Cust Care Processes	Peak-Day Pricing (PDP) and SmartRate™	100 percent EG
7	1	3	EZ	Manage Var Cust Care Processes	Non-PDP and SmartRate	100 percent Electric Distribution
8	1	3	GM	Manage Energy Efficiency-NonBA	Income Qualified Programs	100 percent Gas Distribution
9	1	7	EY	Change/Maint Used Elec Meter	Metering Services and Engineering	100 percent Electric Distribution
10	1	7	HY	Change/Maint Used Gas Meters	Metering Services and Engineering	100 percent Gas Distribution
11	1	9	EZ	Manage Var Cust Care Processes	AMI Gas Module Mass Replacement	100 percent Gas Distribution
12	1	9	HY	Change/Maint Used Gas Meters	AMI Gas Module Mass Replacement	100 percent Gas Distribution
13	1	9	IS	Bill Customers	AMI Gas Module Mass Replacement	100 percent Gas Distribution
14	1	9	JV	Maintain IT Apps & Infra	AMI Gas Module Mass Replacement	100 percent Gas Distribution

2) Category 2 – MWC Combinations Available to Two PG&E Customer Types (Electric and Gas Distribution)

For MWCs that provide support that is equally available to PG&E electric and gas distribution customers, their costs will be allocated to both PG&E electric and gas distribution utility functions. For example, the work associated with Chapter 5's MWC IU (Collect Revenue) involves handling payment-related customer transactions at CSOs and the management of PGE's network of Neighborhood Payment Centers (NPC), which are each equally available to both electric and gas distribution customers.

To split the costs according to the availability of each function to distribution customers, the costs will be allocated based on the number of electric and gas distribution customers. To calculate the number of customers, the average of active electric and gas service agreements during the base year (2020) were used.²⁷ This way, the costs are allocated proportionately (55 percent electric distribution and 45 percent gas distribution) among the set of customers on whose behalf PG&E incurs the costs of these programs (see Table 4-4 below).

²⁷ Exhibit (PG&E-6), WP 4-16, for service agreement counts and allocation.

**TABLE 4-4
ALLOCATIONS FOR CATEGORY 2 MWC COMBINATIONS**

Line No.	Customer Availability Category #	Chapter	MWC	MWC Description	Department/ Program	Allocation
1	2	2	IV	Provide Account Services	LCE - Local Experience	55 percent Electric Distribution/45 percent Gas Distribution
2	2	2	FK	Retain and Grow Customers	Economic Development	55 percent Electric Distribution/45 percent Gas Distribution
3	2	3	EZ	Manage Var Cust Care Processes	Disadvantaged Communities (DAC)	55 percent Electric Distribution/45 percent Gas Distribution
4	2	3	EZ	Manage Var Cust Care Processes	Cooling Centers	55 percent Electric Distribution/45 percent Gas Distribution
5	2	5	EZ	Manage Var Cust Care Processes	CSOs	55 percent Electric Distribution/45 percent Gas Distribution
6	2	5	IU	Collect Revenue	CSOs	55 percent Electric Distribution/45 percent Gas Distribution
7	2	6	AR	Read and Investigate Meters	BRC	55 percent Electric Distribution/45 percent Gas Distribution
8	2	6	EZ	Manage Var Cust Care Processes	BRC	55 percent Electric Distribution/45 percent Gas Distribution
9	2	6	IS	Bill Customers	BRC	55 percent Electric Distribution/45 percent Gas Distribution
10	2	6	IT	Manage Credit	BRC	55 percent Electric Distribution/45 percent Gas Distribution
11	2	6	IU	Collect Revenue	BRC	55 percent Electric Distribution/45 percent Gas Distribution
12	2	7	EZ	Manage Var Cust Care Processes	Metering Services and Engineering	55 percent Electric Distribution/45 percent Gas Distribution

1 **3) Category 3 – MWC Combinations Available to All Three PG&E**
2 **Customer Types**

3 For MWCs that provide support that is available to PG&E EG
4 customers, PG&E electric distribution customers, and PG&E gas
5 distribution customers, a more detailed approach was required to
6 determine the extent of availability for each customer type. To do
7 this, a three-step process was used. First, base year (2020)
8 transaction-level data for each MWC combination was gathered.
9 The purpose of using transaction data was to understand the type of
10 work each area conducts and the relative volume of each type of
11 transaction.

12 Second, each transaction type and its associated volume were
13 categorized according to their customer availability. Third, the
14 availability and volume by transaction type were summarized to
15 calculate an overall availability percentage by customer type. This
16 availability percentage was then used to recommend an overall
17 summarized allocation for these MWC combinations. This
18 three-step process is explained in detail for each of these MWCs in
19 Sections E.1.c.3.a. through E.1.c.3.f. below, and is summarized in
20 Table 4-5 below.

**TABLE 4-5
TRANSACTIONS RELATED TO CATEGORY 3 MWC COMBINATIONS**

Line No.	Customer Availability Category #	Chapter	MWC	MWC Description	Department/ Program	Transaction Data	Exhibit (PG&E-6) Workpaper Reference
1	3	2	IV	Provide Account Services	Business Energy Solutions (BES)	High-Level Transaction Topics	WP 4-19
2	3	2	DK	Manage Customer Inquiries	Escalated Complaints Management	Escalated Complaints and "Here to Help, Consultations, and CAB Referrals"	WP 4-21
3	3	4	DK	Manage Customer Inquiries	Contact Centers	High-Level Call Topics	WP 4-23
4	3	4	EZ	Manage Var Cust Care Processes	Digital Strategy	PGE.com Visits, Your Account Transactions, and Emergency Web Visits	WP 4-26
5	3	5	DK	Manage Customer Inquiries	CSOs	Non-Payment Transaction Topics	WP 4-27

a) Business Energy Solutions (MWC IV – Provide Account Services)

BES provides account management, customer reactive and proactive outreaches, and contracts for all non-residential customers. BES tracks the various tasks assigned to their employees within the Energy Insight system.

As a first step, transaction data from base year 2020 was pulled from the Energy Insight system for all BES employee tasks. In all, there were approximately 38,000 BES transactions, spanning 19 high-level topics, that were completed in 2020.

In Step 2, the transactions were reviewed based on their high-level transaction topic and categorized, using the methodology outlined in Table 4-2 above, according to which customer types they were available: PG&E EG, PG&E electric

1 distribution, Both PG&E electric and gas distribution, and PG&E
 2 Gas distribution.²⁸ For example, vegetation
 3 management-related transactions were categorized as being
 4 available to PG&E electric distribution customers, while
 5 billing-related transactions were categorized as being available
 6 to both PG&E electric and gas distribution customers.

7 In Step 3, the percentage distribution of transactions was
 8 calculated, broken out by customer availability.²⁹ In reviewing
 9 these initial results, an adjustment will be necessary. In the
 10 case of transactions available to both PG&E electric and gas
 11 distribution customers, their percentage will need to be further
 12 split. To do this, the method from Category 2 was used as a
 13 guide (e.g., allocate the percentages proportionately according
 14 to the number of electric and gas distribution customers—a
 15 55 percent/45 percent split). For example, in applying this
 16 process to the 92.78 percent in BES' "Both" category,
 17 51.10 percent would be moved into PG&E electric distribution
 18 and 41.68 percent would be moved into PG&E gas
 19 distribution.³⁰

20 By following this three-step process, the
 21 allocation percentages for BES are PG&E EG: 0.48 percent,
 22 PG&E electric distribution: 57.72 percent, and PG&E gas
 23 distribution 41.80 percent.³¹

24 **b) Escalated Complaints Management (MWC DK – Manage** 25 **Customer Inquiries)**

26 The focus of this MWC is to respond to inquiries that
 27 customers file with the CPUC or escalate to PG&E's executive
 28 offices, the media, or other channels. These inquiries are

²⁸ Exhibit (PG&E-6), WP 4-19, for a complete crosswalk of BES transaction topics and their associated customer type availability.

²⁹ Exhibit (PG&E-6), WP 4-20, lines 3-5, for percentage calculation details.

³⁰ Exhibit (PG&E-6), WP 4-20, lines 8-12, for details on splitting the "Both" category.

³¹ Exhibit (PG&E-6), WP 4-20, lines 17-18, for overall percentage.

1 categorized according to the focus of the inquiry and then
 2 entered in a database by the Escalated Complaints
 3 Management team as they are received.

4 As a first step, transaction data from base year 2020 was
 5 pulled from the Escalated Completed Management database.
 6 In all, there were approximately 1,600 inquiries, spanning
 7 41 high-level topics, that were completed in 2020.

8 In Step 2, the transactions were reviewed based on their
 9 high-level transaction topic and categorized, using the
 10 methodology outlined in Table 4-2 above, according to which
 11 customer types they were available: PG&E EG, PG&E electric
 12 distribution, Both PG&E electric and gas distribution, and PG&E
 13 Gas distribution.³² It is important to note that PG&E handled a
 14 few complaints related to transactions available to ESP EG
 15 customers (1 transaction) and CTA gas supplier customers
 16 (16 transactions). These transactions were tracked under their
 17 respective customer type: ESP EG and CTA gas supply.³³

18 In Step 3, the percentage distribution of transactions was
 19 calculated and broken out by customer availability.³⁴ In
 20 reviewing these initial results, a few adjustments will be
 21 necessary. First, as noted above, the percentage for
 22 transactions available to both PG&E electric and gas distribution
 23 customers will need to be further split (using Category 2's
 24 55 percent/45 percent split). For example, in applying
 25 this percentage to the 89.42 percent in the "Both" category,
 26 49.25 percent would be moved into PG&E electric distribution

32 Exhibit (PG&E-6), WP 4-21, for a complete crosswalk of Escalated Complaints Management inquiry topics and their associated customer type availability.

33 Exhibit (PG&E-6), WP 4-21, line 1, for transactions available to ESP EG customers and Exhibit (PG&E-6), WP 4-21, lines 39-41, for transactions available to CTA gas supplier customers.

34 Exhibit (PG&E-6), WP 4-22, lines 3-5, for percentage calculation details.

and 40.17 percent would be moved into PG&E gas distribution.³⁵

Second, the transactions available to ESP EG and CTA gas supply customers are not generally included in the GRC.³⁶ While these customer types are not included in the GRC, the costs Customer Care incurs on their behalf would be included (although they would have to be allocated to one of PG&E's utility functions included in the GRC [e.g., EG, electric distribution, or gas distribution]). In addition, the proportion of these transactions is not significant; each are under 1 percent. Given this, PG&E proposes to allocate the ESP EG percentage to PG&E electric distribution, and PG&E and CTA gas supply to PG&E gas distribution.³⁷

By following this 3-step process, the allocation percentages for Escalated Complaints Management are PG&E electric distribution: 58.85 percent, and PG&E gas distribution 41.15 percent.³⁸

c) Contact Centers (MWC DK – Manage Customer Inquiries)

The focus of PG&E's contact centers is to handle incoming customer inquiries (primarily via phone calls). The Contact Centers' phone system tracks call volume and high-level call topics based on the PG&E phone number the customer called, the choices the customer made within the IVR, and call routing business rules housed within the system.

As a first step, transaction data from base year 2020 was pulled from the phone system. In all, there were approximately 4.96 million calls, spanning 39 high-level call topics, that were handled in 2020.

³⁵ Exhibit (PG&E-6), WP 4-22, lines 8-12, for details on splitting the "Both" category.

³⁶ See Table 4-2 above for a crosswalk of how PG&E Customer Care costs correspond to customer type availability and utility function.

³⁷ Exhibit (PG&E-6), WP 4-22, lines 14-16, for details on reallocating the ESP EG and CTA gas supply percentages.

³⁸ Exhibit (PG&E-6), WP 4-22, lines 17-18, for overall percentage.

In Step 2, the transactions were reviewed based on their high-level call topic and categorized, using the methodology outlined in Table 4-2 above, according to which customer types they were available: PG&E EG, PG&E electric distribution, Both PG&E electric and gas distribution, and PG&E Gas distribution.³⁹ It is important to note that PG&E handled some calls related to transactions available to ESP and CTA customers.⁴⁰ While virtually all of the call topics related to the type of issue handled during the call (e.g., billing, payment questions, etc.), ESP- and CTA-related call topics identified calls from ESP or CTA customers without revealing the specific purpose of the call. To determine the topic that was discussed in ESP and CTA calls, a sample of calls⁴¹ was reviewed to determine the root cause for the phone call. Then, these root causes were categorized according to their customer type availability, which revealed the Contact Centers handed some call transactions available to ESP EG, CTA gas supply, and PG&E gas supply.⁴²

In Step 3, the percentage distribution of transactions was calculated, broken out by customer availability.⁴³ In reviewing these initial results, a few adjustments will be necessary. First, as noted above, the percentage for transactions available to both PG&E electric and gas distribution customers will need to

³⁹ Exhibit (PG&E-6), WP 4-23, for a complete crosswalk of Contact Centers high-level call topics and their associated customer type availability.

⁴⁰ Exhibit (PG&E-6), WP 4-23, line 38, for transactions available to ESP customers and Exhibit (PG&E-6), WP 4-23, line 39, for transactions available to CTA gas supplier customers.

⁴¹ To determine a statistically valid sample, a sample size calculator (<https://www.surveymonkey.com/mp/sample-size-calculator/>) (as of May 10, 2021), was used, set at 95 percent confidence and 5 percent margin of error. Based on 9,736 total ESP calls in 2020, the required sample size is 370 calls. For 1,426 total CTA calls in 2020, the required sample size is 303.

⁴² Exhibit (PG&E-6), WP 4-24, lines 1-4, for the results of the call sample review and Exhibit (PG&E-6), WP 4-24, lines 6-9, for the estimated ESP and CTA call volumes.

⁴³ Exhibit (PG&E-6), WP 4-25, lines 7-9, for percentage calculation details.

be further split (using Category 2's 55 percent/45 percent split). For example, in applying this percentage to the 92.09 percent in the "Both" category, 50.72 percent would be moved into PG&E electric distribution and 41.37 percent would be moved into PG&E gas distribution.⁴⁴

Second, as noted above, PG&E proposes to allocate the ESP EG percentage to PG&E electric distribution, and PG&E and CTA gas supply to PG&E gas distribution.⁴⁵

By following this three-step process, the allocation percentages for Escalated Complaints Management are PG&E EG: 0.04 percent, PG&E electric distribution: 58.39 percent, and PG&E gas distribution 41.57 percent.⁴⁶

d) Digital Strategy (MWC EZ – Customer Technology)

The focus of PG&E's websites is to enable customers' self-service.

As a first step, transaction data from base year 2020 was pulled for PG&E websites. An important aspect of website data is that it is based on whether the customer was logged into the site at the time of their visit. If they were not logged in, as is the case with PGE.com (the un-logged-in portion of PG&E's website that contains general information) and Emergency Web (an un-logged-in portion of PG&E's website used during emergencies), PG&E uses site visits to measure the number of transactions. However, if the customer was logged into Your Account (the logged-in portion of the site), PG&E uses actual transaction counts captured by the system. In all, there were approximately 105 million website visits and transactions that were completed in 2020.

⁴⁴ Exhibit (PG&E-6), WP 4-25, lines 12-16, for details on splitting the "Both" category.

⁴⁵ Exhibit (PG&E-6), WP 4-25, lines 18-22, for details on reallocating the ESP EG and CTA gas supply percentages.

⁴⁶ Exhibit (PG&E-6), WP 4-25, lines 21-22, for overall percentage.

In Step 2, the visits and transactions were reviewed based on their high-level topic and categorized, using the methodology outlined in Table 4-2 above, according to which customer types they were available: PG&E EG, PG&E electric distribution, Both PG&E electric and gas distribution, and PG&E Gas distribution.⁴⁷

In Step 3, the percentage distribution of transactions was calculated, broken out by customer availability.⁴⁸ As in previous sections, an adjustment will be necessary. In the case of transactions available to both PG&E electric and gas distribution customers, their percentage will need to be further split. To do this, the method from Category 2 was used as a guide (e.g., allocate the percentages proportionately according to the number of electric and gas distribution customers—a 55 percent/45 percent split). For example, in applying this process to the 91.67 percent in the “Both” category, 50.49 percent would be moved into PG&E electric distribution and 41.18 percent would be moved into PG&E gas distribution.⁴⁹

By following this three-step process, the allocation percentages for Digital Strategy are PG&E electric distribution: 58.80 percent and PG&E gas distribution: 41.20 percent.⁵⁰

e) CSO (MWC DK – Manage Customer Inquiries)

Under this MWC, PG&E’s CSOs provide support through handling nonpayment transactions at CSOs. These nonpayment transactions include starting and stopping service, service appointments, and payment arrangements. The data

⁴⁷ Exhibit (PG&E-6), WP 4-26, for a complete crosswalk of web visits and transactions and their associated customer type availability.

⁴⁸ Exhibit (PG&E-6), WP 4-26, lines 7-9, for percentage calculation details.

⁴⁹ Exhibit (PG&E-6), WP 4-26, lines 12-16, for details on splitting the “Both” category.

⁵⁰ Exhibit (PG&E-6), WP 4-26, lines 21-22, for overall percentage.

underlying these transactions are based on cases, pay plan details, and field activities, and orders (customer appointments).

As a first step, transaction data from 2019 was pulled for CSOs.⁵¹ In all, there were approximately 272,000 CSO nonpayment transactions, spanning 29 high-level topics, that were completed in 2019.⁵²

In Step 2, the transactions were reviewed based on their high-level transaction topic and categorized, using the methodology outlined in Table 4-2 above, according to which customer types they were available: PG&E EG, PG&E electric distribution, Both PG&E electric and gas distribution, and PG&E Gas distribution.⁵³ It is important to note that CSOs handled some transactions that were available only to ESP and CTA customers.⁵⁴

In Step 3, the percentage distribution of transactions was calculated, broken out by customer availability.⁵⁵ As in previous sections, adjustments will be necessary. First, in the case of transactions available to both PG&E electric and gas distribution customers, their percentage will need to be further split. To do this, the method from Category 2 was used as a guide (e.g., allocate the percentages proportionately according to the number of electric and gas distribution customers—a 55 percent/45 percent split). For example, in applying this

⁵¹ Due to health and safety precautions, PG&E temporarily closed all of its CSOs in March 2020 in response to the COVID-19 pandemic. Therefore, 2019 data was used as it was the most recent complete year with 12 months of data.

⁵² The overall count of 2019 transactions are greater here than what is provided in Exhibit (PG&E-6), Ch. 5, because some processes require multiple transactions per customer request and are included here, while in Ch. 5, an overall distinct count is provided.

⁵³ Exhibit (PG&E-6), WP 4-27, for a complete crosswalk of CSO transactions and their associated customer type availability.

⁵⁴ Exhibit (PG&E-6), WP 4-27, line 1, for transactions available to ESP customers and Exhibit (PG&E-6), WP 4-27, line 29, for transactions available to CTA gas supplier customers.

⁵⁵ Exhibit (PG&E-6), WP 4-28, lines 3-5, for percentage calculation details.

process to the 16.14 percent in the “Both” category,
 8.89 percent would be moved into PG&E electric distribution
 and 7.25 percent would be moved into PG&E gas distribution.⁵⁶

Second, as noted above, PG&E proposes to allocate the
 ESP EG percentage to PG&E electric distribution, and PG&E
 and CTA gas supply to PG&E gas distribution.⁵⁷

By following this three-step process, the
 allocation percentages for CSO are PG&E electric distribution:
 56.09 percent and PG&E gas distribution: 43.91 percent.⁵⁸

f) Category 3 Methodology Discussion

In developing a methodology for Category 3, PG&E has
 taken an in-depth and data-driven approach to calculate
 individual allocations for the five MWC combinations available to
 all three PG&E customer types. This way, by incorporating
 specific and detailed transaction data, a full picture emerges of
 the extent of customer service that these business areas
 provide for PG&E’s generation and distribution functions. Taken
 together, these five MWC combinations result in a rough
 58 percent/42 percent allocation split between PG&E electric
 and gas distribution, with a minimal amount (only 0.1 percent)
 devoted to PG&E EG (see Table 4-6 below, “Total” line).

⁵⁶ Exhibit (PG&E-6), WP 4-28, lines 8-12, for details on splitting the “Both” category.

⁵⁷ Exhibit (PG&E-6), WP 4-28, lines 14-16, for details on reallocating the ESP EG and CTA gas supply percentages.

⁵⁸ Exhibit (PG&E-6), WP 4-28, lines 17-18, for overall percentage.

TABLE 4-6
TRANSACTION DISTRIBUTION FOR CATEGORY 3 MWC COMBINATIONS

Line No.	Chapter	MWC	MWC Desc.	Dept. /Program	PG&E Electric Gen.	ESP Electric Gen.*	PG&E Electric Dist.	Both PG&E Electric and Gas Dist.	PG&E Gas Dist.	PG&E Gas Supp.*	CTA Gas Supp.*	Total	Exhibit (PG&E-6) Workpaper Reference
1	2	IV	Provide Account Services	BES	0.48%	N/A	57.72%	N/A	41.80%	N/A	N/A	100.00%	WP 4-20, lines 6-18
2	2	DK	Manage Customer Inquiries	Escalated Complaints Management	0.00%	N/A	58.85%	N/A	41.15%	N/A	N/A	100.00%	WP 4-22, lines 6-18
3	4	DK	Manage Customer Inquiries	Contact Centers	0.04%	N/A	58.39%	N/A	41.57%	N/A	N/A	100.00%	WP 4-25, lines 10-22
4	4	EZ	Manage Var Cust Care Processes	Digital Strategy	0.00%	N/A	58.80%	N/A	41.20%	N/A	N/A	100.00%	WP 4-26, lines 10-22
5	5	DK	Manage Customer Inquiries	CSOs	0.00%	N/A	56.09%	N/A	43.91%	N/A	N/A	100.00%	WP 4-28, lines 6-18
6				Total	0.10%	N/A	58.30%	N/A	41.61%	N/A	N/A	100.00%	N/A

* These columns represent customer types generally considered in other proceedings, outside of PG&E's GRC.

1 In previous GRCs, PG&E had used a “common” allocator
2 (based on the proportion of PG&E electric and gas distribution
3 customers, effectively the same solution proposed for
4 Category 2) to allocate costs for these five MWC combinations
5 based on our understanding that Customer Care did not
6 generally provide direct support to customers that were
7 differentiated in terms of their commodity supplier, but instead
8 provided support to them in terms of their use of PG&E
9 distribution services. In stepping through this new proposed
10 allocation process, which involves categorizing these five MWC
11 combinations’ transactions in terms of customer availability, this
12 assumption still holds true; PG&E’s data indicates that
13 99.9 percent of the transactions handled by these MWC
14 combinations are available to PG&E electric and gas distribution
15 customers, while only 0.1 percent are available to PG&E EG
16 customers.

17 In drilling down into this level of detail, one point to consider
18 is that the day-to-day use of PG&E programs and services is
19 dynamic and changes over time. Therefore, the exact
20 distribution of transaction types is variable. In contrast, while
21 the overall proportion of PG&E electric and gas distribution
22 customers can change over time, it is much less varied. In fact,
23 the current customer proportions have not changed since the
24 2020 GRC.

25 In considering the increased complexity required by delving
26 into this additional level of detail and the dynamism of the
27 underlying transactions, which still yield similar results to
28 PG&E’s previous and much simpler “common” allocation, PG&E
29 recommends the continued use of the “55%/45% split” (also
30 used for Category 2) for these five MWC combinations. This
31 55 percent/45 percent split methodology would approximate the
32 results obtained though the proposed Category 3 methodology
33 but is more straightforward and stable (see Table 4-7 below).

**TABLE 4-7
ALLOCATIONS FOR CATEGORY 3 MWC COMBINATIONS**

Line No.	Customer Availability Category #	Chapter	MWC	MWC Description	Department/ Program	Allocation
1	3	2	IV	Provide Account Services	BES	55 percent Electric Distribution/ 45 percent Gas Distribution
2	3	2	DK	Manage Customer Inquiries	Escalated Complaints Management	55 percent Electric Distribution/ 45 percent Gas Distribution
3	3	4	DK	Manage Customer Inquiries	Contact Centers	55 percent Electric Distribution/ 45 percent Gas Distribution
4	3	4	EZ	Manage Var Cust Care Processes	Digital Strategy	55 percent Electric Distribution/ 45 percent Gas Distribution
5	3	5	DK	Manage Customer Inquiries	CSOs	55 percent Electric Distribution/ 45 percent Gas Distribution

4) Category 4 – MWC Combinations Indirectly Available to All 3 PG&E Customer Types

These MWC combinations conduct back-office activities that do not directly provide customer service, but instead provide behind-the-scenes support to other Customer Care MWC combinations (that in turn provide support to PG&E EG customers, PG&E electric distribution customers, and PG&E gas distribution customers). The main issue with attempting to quantify the availability of this indirect support is that the exact MWC combinations this indirect work supports would need to be known. Then, the allocations of the recipient MWC combinations would be needed to calculate the allocations for this indirect work. However, this would be extremely difficult to determine because indirect support can vary by which MWCs receive it and how much support they receive over time.

A simpler approach is to attempt to approximate the overall customer availability of this indirect support. In considering Customer Care overall, of the 31 MWC combinations that provide direct support to PG&E customer types (Categories 1, 2, and 3):

- Only one is 100 percent allocated to PG&E EG (Chapter 3's PDP & SmartRate [MWC EZ – Manage Var Cust Care Processes]).
- The six MWC combinations from Category 3 involve PG&E EG only in 0.1 percent of their transactions.
- The remaining 24 MWC categories are available only to distribution customers.

Given this, it could be assumed that the indirect support provided by Category 4's MWC combinations is available mainly to distribution customers. In this case, PG&E recommends, like with Category 2 and 3, to also use the "55 percent Electric Distribution/45 percent Gas Distribution" split for these five MWC combinations. This would provide an approximation of customer availability of this indirect work and is much easier to calculate than attempting to quantify the support provided to individual recipient MWC combinations.

**TABLE 4-8
ALLOCATIONS FOR CATEGORY4 MWC COMBINATIONS**

Line No.	Customer Availability Category #	Chapter	MWC	MWC Description	Department/ Program	Allocation
1	4	2	IV	Provide Account Services	Business Operations	55 percent Electric Distribution/45 percent Gas Distribution
2	4	4	EZ	Manage Var Cust Care Processes	Customer Care Technology	55 percent Electric Distribution/45 percent Gas Distribution
3	4	8	EZ	Manage Var Cust Care Processes	Compliance and Regulatory Strategy	55 percent Electric Distribution/45 percent Gas Distribution
4	4	8	OM	Operational Management	Compliance and Regulatory Strategy	55 percent Electric Distribution/45 percent Gas Distribution
5	4	10	JV	Maintain IT Apps & Infra	Customer Care Technology Projects	55 percent Electric Distribution/45 percent Gas Distribution

5) Category 5 – MWC Combination Available to 0 PG&E Customer Types

Chapter 2's LCE – Third-Party Relations (MWC IV – Provide Account Services) is only available to ESP and CTA customers. Given these customer types are not included in the GRC, the costs Customer Care incurs on their behalf would be included (although they would have to be allocated to one of PG&E's utility functions included in the GRC [e.g., EG, electric distribution, or gas distribution]).⁵⁹ PG&E proposes to allocate the ESP EG percentage to PG&E electric distribution, and PG&E and CTA gas supply to PG&E gas distribution.

6) Category 6 – MWC Combination Indirectly Available to 2 PG&E Customer Types (Electric and Gas Distribution)

Chapter 2's Non-Tariffed Products and Services (MWC EL – Develop New Revenue) are available to PG&E electric distribution and PG&E gas distribution customers. Given this, PG&E recommends also using the 55 percent Electric Distribution/45 percent Gas Distribution split for this MWC combination.

d. Discussion

In this section, first, the use of the cost causation principle as the basis of our proposed cost allocation methodology was reviewed, noting how the cost of a given Customer Care service or program would be allocated according to which customers the program is available. Second, PG&E's Customer Care's individual services were catalogued and their availability to PG&E EG customers, PG&E electric distribution customers, and PG&E gas distribution customers was identified. Third, an in-depth consideration of each MWC combination's customer availability was detailed and a corresponding methodology to appropriately allocate its costs to corresponding PG&E's utility functions (e.g., EG, electric distribution, and/or gas distribution) was

⁵⁹ See Table 4-2 above for a crosswalk of how PG&E Customer Care costs correspond to customer type availability and utility function.

recommended. Overall, this proposed cost allocation methodology is appropriate, fair, and equitable because the costs of Customer Care services and programs are assigned to the set of customers on whose behalf PG&E incurred those costs.

In addition, by detailing the extent to which PG&E's Customer Care services and programs support its utility functions, it became clear that the vast majority of Customer Care's work (99.58 percent) supports PG&E's electric and gas distribution functions, with very little (only 0.42 percent) devoted to PG&E's EG function.⁶⁰

2. Recommended Allocations

Using the methodology outlined in the previous section, the recommended allocations for each MWC combination are detailed below.⁶¹

a. Chapter 2 – Customer Engagement

1) Customer and Community Services

a) MWC IV (Provide Account Services)

i) BES

BES provides account management, customer reactive and proactive outreaches, and contracts for all non-residential customers. Given these activities relate to a variety of utility functions, the process outlined for Category 3 to allocate these costs was used. To properly allocate this work, the BES transactions completed in 2020 were gathered and broken out by transaction topic.⁶² Then the potential allocation based on the BES transactions and the percentage of electric and gas service agreements were calculated (see potential allocation below).⁶³

⁶⁰ Exhibit (PG&E-6), WP 4-18, line 40, for Customer Care's overall allocation percentages.

⁶¹ Exhibit (PG&E-6), WP 4-18, for an overall summary of allocations by MWC combination.

⁶² Exhibit (PG&E-6), WP 4-19, for a crosswalk of BES transactions and their associated utility function categories.

⁶³ Exhibit (PG&E-6), WP 4-20, for BES calculation details.

**TABLE 4-9
BES (MWC IV) POTENTIAL ALLOCATION CALCULATION DETAIL**

Line No.	PG&E Electric Gen.	ESP Electric Gen.	Electric Dist.	Gas Dist.	PG&E Gas Supp.	CTA Gas Supp.	Total
1	0.48%	0.00%	57.72%	41.80%	0.00%	0.00%	100.00%

1 In reviewing these results, it is notable that
2 the percentage of generation is negligible for this program
3 (less than 1 percent). Given the complexity of this process,
4 PG&E recommends using the 55 percent Electric
5 Distribution/45 percent Gas Distribution split as it provides
6 comparable results in a more straightforward, less
7 administratively burdensome manner (see recommended
8 allocation below).⁶⁴

**TABLE 4-10
BES (MWC IV) RECOMMENDED ALLOCATION CALCULATION DETAIL**

Line No.	PG&E Electric Gen.	ESP Electric Gen.	Electric Dist.	Gas Dist.	PG&E Gas Supp.	CTA Gas Supp.	Total
1	0.00%	0.00%	55.00%	45.00%	0.00%	0.00%	100.00%

9 **ii) LCE**

10 **A) Local Experience**

11 One of the focuses of Local Experience is to
12 coordinate local PG&E maintenance and construction
13 work. Local Experience is made up of cross-functional,
14 multidisciplinary groups that work to solve customer and
15 community issues at the city and county level. Given
16 these activities are equally available to and/or both
17 benefit electric and gas distribution customers, these
18 costs were allocated according to the percentage of

⁶⁴ Exhibit (PG&E-6), WP 4-16, for service agreement counts and percentages.

electric and gas service agreements (as outlined for
Category 2; see table below).⁶⁵

TABLE 4-11
LOCAL EXPERIENCE (MWC IV) ALLOCATION CALCULATION DETAIL

Line No.	PG&E Electric Gen.	ESP Electric Gen.	Electric Dist.	Gas Dist.	PG&E Gas Supp.	CTA Gas Supp.	Total
1	0.00%	0.00%	55.00%	45.00%	0.00%	0.00%	100.00%

B) Third-Party Relations

The focus of the Third-Party Relations is to establish and manage PG&E's business and operational relationships with ESPs and CTAs. As outlined for Category 5 above, these costs were allocated according to the percentage of electric and gas service agreements (see table below).⁶⁶

TABLE 4-12
THIRD PARTY RELATIONS (MWC IV) ALLOCATION CALCULATION DETAIL

Line No.	PG&E Electric Gen.	ESP Electric Gen.	Electric Dist.	Gas Dist.	PG&E Gas Supp.	CTA Gas Supp.	Total
1	0.00%	0.00%	55.00%	45.00%	0.00%	0.00%	100.00%

iii) Business Operations

Given the focus of the work under this program are back-office activities related to operations and analysis for BES and LCE, these costs were allocated according to the percentage of electric and gas service agreements (as outlined for Category 4; see table below).⁶⁷

⁶⁵ Exhibit (PG&E-6), WP 4-16, for service agreement counts and percentages.

⁶⁶ Exhibit (PG&E-6), WP 4-16, for service agreement counts and percentages.

⁶⁷ Exhibit (PG&E-6), WP 4-16, for service agreement counts and percentages.

**TABLE 4-13
BUSINESS OPERATIONS (MWC IV) ALLOCATION CALCULATION DETAIL**

Line No.	PG&E Electric Gen.	ESP Electric Gen.	Electric Dist.	Gas Dist.	PG&E Gas Supp.	CTA Gas Supp.	Total
1	0.00%	0.00%	55.00%	45.00%	0.00%	0.00%	100.00%

b) Escalated Complaints Management (MWC DK – Manage Customer Inquiries)

The focus of this MWC is to respond to inquiries that customers file with the CPUC or escalate to PG&E’s executive offices, the media, or other channels. To categorize this work, inquiries received in 2020, broken out by transaction topic, were used as outlined above for Category 3.⁶⁸ Then, the potential allocation was calculated based on the inquiry transaction topics and the percentage of electric and gas service agreements (see potential allocation below).⁶⁹

**TABLE 4-14
ESCALATED COMPLAINTS MANAGEMENT (MWC DK)
POTENTIAL ALLOCATION CALCULATION DETAIL**

Line No.	PG&E Electric Gen.	ESP Electric Gen.	Electric Dist.	Gas Dist.	PG&E Gas Supp.	CTA Gas Supp.	Total
1	0.00%	0.00%	58.85%	41.15%	0.00%	0.00%	100.00%

In reviewing these results, it is notable that the percentage of generation is negligible for this MWC (less than 1 percent for both electric and gas supply individually). Given the complexity of this process, PG&E recommends using the 55 percent Electric Distribution/45 percent Gas Distribution split as it provides comparable results in a more straightforward, less

⁶⁸ Exhibit (PG&E-6), WP 4-21, for a crosswalk of inquiry transaction topics and their associated utility function categories.

⁶⁹ Exhibit (PG&E-6), WP 4-22, for Escalated Complaints Management calculation details.

1 administratively burdensome manner (see recommended
2 allocation below).⁷⁰

TABLE 4-15
ESCALATED COMPLAINTS MANAGEMENT (MWC DK)
RECOMMENDED ALLOCATION CALCULATION DETAIL

Line No.	PG&E Electric Gen.	ESP Electric Gen.	Electric Dist.	Gas Dist.	PG&E Gas Supp.	CTA Gas Supp.	Total
1	0.00%	0.00%	55.00%	45.00%	0.00%	0.00%	100.00%

3 **2) PSPS Planning and Preparedness (MWC IG – Manage Var Bal**
4 **Acct Processes)**

5 The focus of this MWC is non-event PSPS-related work. Given
6 this work is directed solely to electric distribution customers,
7 100 percent of these costs were assigned to electric distribution
8 (as outlined in Category 1 above).

9 **3) Economic Development (MWC FK – 'Retain & Grow Customers)**

10 The focus of this MWC is to support communities with job
11 creation, employer attraction, and business-retention initiatives.
12 Given these activities are available both to electric and gas
13 distribution customers, these costs were allocated according to
14 the percentage of electric and gas service agreements (as outlined
15 for Category 2; see table below).⁷¹

TABLE 4-16
ECONOMIC DEVELOPMENT (MWC FK) ALLOCATION CALCULATION DETAIL

Line No.	PG&E Electric Gen.	ESP Electric Gen.	Electric Dist.	Gas Dist.	PG&E Gas Supp.	CTA Gas Supp.	Total
1	0.00%	0.00%	55.00%	45.00%	0.00%	0.00%	100.00%

⁷⁰ Exhibit (PG&E-6), WP 4-16, for service agreement counts and percentages.

⁷¹ Exhibit (PG&E-6), WP 4-16, for service agreement counts and percentages.

4) Non-Tariffed Products and Services (MWC EL – Develop New Revenue)

The focus of this MWC is to offer additional services using PG&E's existing electric and gas assets to generate revenue, which reduces service costs and customer rates. Given these activities are directed at both electric and gas distribution assets, these costs were allocated according to the percentage of electric and gas service agreements (Category 6; see table below).⁷²

**TABLE 4-17
NON-TARIFFED PRODUCTS AND SERVICES (MWC EL)
ALLOCATION CALCULATION DETAIL**

Line No.	PG&E Electric Gen.	ESP Electric Gen.	Electric Dist.	Gas Dist.	PG&E Gas Supp.	CTA Gas Supp.	Total
1	0.00%	0.00%	55.00%	45.00%	0.00%	0.00%	100.00%

5) MWC EZ (Manage Var Cust Care Processes)

a) Distributed Generation

The focus of the work under this program is to enable customer adoption of distributed generation technologies. Given this work is directed solely to electric distribution customers, 100 percent of these costs were assigned to electric distribution (as outlined in Category 1 above).

b) Customer Data Tools

The focus of the work under this program is to offer new tools for customers, third parties, researchers, and businesses to help make data-driven decisions regarding energy use and optimizing electric rate plans. Given this work is solely available to electric distribution customers, 100 percent of these costs were assigned to electric distribution (as outlined in Category 1 above).

⁷² Exhibit (PG&E-6), WP 4-16, for service agreement counts and percentages.

6) Clean Energy Transportation

a) MWC GM (Manage Energy Efficiency-NonBA)

The focus of the work under this MWC is to provide customer support, education, and outreach on clean fuel usage to help California meet its greenhouse gas emission reduction goals. Given this work is solely available to electric distribution customers, 100 percent of these costs were assigned to electric distribution (as outlined in Category 1 above).

b) MWC CG (CAT Balancing Account)

The focus of the work under this MWC is to develop and maintain electric vehicle infrastructure. Given this work is solely available to electric distribution customers, 100 percent of these costs were assigned to electric distribution (as outlined in Category 1 above).

b. Chapter 3 – Pricing Products and Income Qualified Programs

1) Pricing Products – Rate Strategies and Tools (MWC EZ – Manage Var Cust Care Processes)

The focus of the work under this program is to ensure PG&E electric distribution customers are effectively transitioned to time of use rate plans, have other meaningful and comprehensible rate plan options, can switch rate plans easily, and have payment options. These activities classified into two groups: PDP/SmartRate Work and Non-PDP/SmartRate Work.

a) PDP/SmartRate Work

PDP and SmartRate are programs designed to incent customers to reduce their electric usage during heat events. Given these programs are only available to PG&E EG customers, 100 percent of these costs were assigned to EG (as outlined in Category 1 above).

b) Non-PDP/SmartRate Work

All remaining work under this MWC relates to electric distribution customers. Therefore, 100 percent of these costs

were assigned to electric distribution (as outlined in Category 1 above).

2) Income Qualified Programs

a) MWC GM (Manage Energy Efficiency-NonBA)

The focus of the work under this MWC is Natural Gas Appliance Testing as part of the Energy Savings Assistance program. Given this work is devoted solely to natural gas appliances, 100 percent of these costs were assigned to gas distribution (as outlined in Category 1 above).

b) MWC EZ (Manage Var Cust Care Processes)

i) Disadvantaged Communities (DAC)

PG&E's DAC team provides regulatory support, leads external stakeholder collaboration, and develops enhanced partnerships with Community Based Organizations all in support of addressing energy needs across DAC in PG&E's service area. Given these activities are equally available to and/or both benefit electric and gas distribution customers, these costs were allocated according to the percentage of electric and gas service agreements (Category 2; see table below).⁷³

**TABLE 4-18
DAC (MWC EZ) ALLOCATION CALCULATION DETAIL**

Line No.	PG&E Electric Gen.	ESP Electric Gen.	Electric Dist.	Gas Dist.	PG&E Gas Supp.	CTA Gas Supp.	Total
1	0.00%	0.00%	55.00%	45.00%	0.00%	0.00%	100.00%

ii) Cooling Centers

Cooling Centers are facilities open to the public during summer months when the daily temperature exceeds a certain temperature threshold. Cooling centers provide

⁷³ Exhibit (PG&E-6), WP 4-16, for service agreement counts and percentages.

shelter from extreme heat for the elderly and others vulnerable to the heat and can reduce the risks of heat-induced ailments for the targeted population of elderly and low-income residents. Given these activities are equally available to and/or both benefit electric and gas distribution customers, these costs were allocated according to the percentage of electric and gas service agreements (Category 2; see table below).⁷⁴

TABLE 4-19
COOLING CENTERS (MWC EZ) ALLOCATION CALCULATION DETAIL

Line No.	PG&E Electric Gen.	ESP Electric Gen.	Electric Dist.	Gas Dist.	PG&E Gas Supp.	CTA Gas Supp.	Total
1	0.00%	0.00%	55.00%	45.00%	0.00%	0.00%	100.00%

c. Chapter 4 – Contact Centers, Customer Technology, and Digital Strategy

1) Contact Centers (MWC DK – Manage Customer Inquiries)

Given that PG&E's contact centers provide support related to a variety of utility functions through handling incoming customer inquiries (primarily via phone calls), these costs were allocated using the methodology outlined above in Section E.1.c.3.c. for Category 3. The initial allocation based on the high-level call topics, ESP and CTA call samples, and the percentage of electric and gas service agreements is listed below.⁷⁵

⁷⁴ Exhibit (PG&E-6), WP 4-16, for service agreement counts and percentages.

⁷⁵ Exhibit (PG&E-6), WP 4-25, for Contact Center calculation details.

TABLE 4-20
CONTACT CENTERS (MWC DK) POTENTIAL ALLOCATION CALCULATION DETAIL

Line No.	PG&E Electric Gen.	ESP Electric Gen.	Electric Dist.	Gas Dist.	PG&E Gas Supp.	CTA Gas Supp.	Total
1	0.04%	0.00%	58.39%	41.57%	0.00%	0.00%	100.00%

1 In reviewing these results, it is notable that the percentage of
2 generation is negligible for this MWC (less than 1 percent, including
3 ESP generation). Given the complexity of this process, PG&E
4 recommends using the 55 percent Electric Distribution/45 percent
5 Gas Distribution split as it provides comparable results in a more
6 straightforward, less administratively burdensome manner
7 (see recommended allocation below).⁷⁶

TABLE 4-21
CONTACT CENTERS (MWC DK) RECOMMENDED ALLOCATION CALCULATION DETAIL

Line No.	PG&E Electric Gen.	ESP Electric Gen.	Electric Dist.	Gas Dist.	PG&E Gas Supp.	CTA Gas Supp.	Total
1	0.00%	0.00%	55.00%	45.00%	0.00%	0.00%	100.00%

8 **2) Customer Care Technology (MWC EZ – Customer Technology)**

9 The focus of the work under this department is to oversee
10 Customer Care technology projects. Given that this is
11 behind-the-scenes work, which supports customer service activities
12 by the larger Customer Care organization (as captured in other
13 MWCs in this section related to customer-facing work), these costs
14 were allocated according to the percentage of electric and gas
15 service agreements (Category 4; see table below).⁷⁷

⁷⁶ Exhibit (PG&E-6), WP 4-16, for service agreement counts and percentages.

⁷⁷ Exhibit (PG&E-6), WP 4-16, for service agreement counts and percentages.

TABLE 4-22
CUSTOMER CARE TECHNOLOGY (MWC EZ) ALLOCATION CALCULATION DETAIL

Line No.	PG&E Electric Gen.	ESP Electric Gen.	Electric Dist.	Gas Dist.	PG&E Gas Supp.	CTA Gas Supp.	Total
1	0.00%	0.00%	55.00%	45.00%	0.00%	0.00%	100.00%

3) Digital Strategy (MWC EZ – Customer Technology)

Given that PG&E's websites provide support related to a variety of utility functions through self-service, these costs were allocated using the methodology outlined above for Category 3.⁷⁸
 See potential allocation below.

TABLE 4-23
DIGITAL STRATEGY (MWC EZ) POTENTIAL ALLOCATION CALCULATION DETAIL

Line No.	PG&E Electric Gen.	ESP Electric Gen.	Electric Dist.	Gas Dist.	PG&E Gas Supp.	CTA Gas Supp.	Total
1	0.00%	0.00%	58.80%	41.20%	0.00%	0.00%	100.00%

Given the complexity of this process, PG&E recommends using the 55 percent Electric Distribution/45 percent Gas Distribution split based as it provides comparable results in a more straightforward, less administratively burdensome manner (see recommended allocation below).⁷⁹

TABLE 4-24
DIGITAL STRATEGY (MWC EZ) RECOMMENDED ALLOCATION CALCULATION DETAIL

Line No.	PG&E Electric Gen.	ESP Electric Gen.	Electric Dist.	Gas Dist.	PG&E Gas Supp.	CTA Gas Supp.	Total
1	0.00%	0.00%	55.00%	45.00%	0.00%	0.00%	100.00%

⁷⁸ Exhibit (PG&E-6), WP 4-26, for Digital Strategy calculation details.

⁷⁹ Exhibit (PG&E-6), WP 4-16, for service agreement counts and percentages.

d. Chapter 5 – Customer Service Offices

1) MWC DK (Manage Customer Inquiries)

Under this MWC, PG&E's CSOs provide support related to a variety of utility functions through handling non-payment transactions at CSOs, which include inquiries related to electric and gas service, electric and gas meters, and pay plans. To categorize this, work costs were allocated using the methodology outlined above for Category 3, based on the 2020 non-payment transaction volume handled by CSO.⁸⁰ Then, the potential allocation was calculated based on the non-payment transactions and the percentage of electric and gas service agreements (see potential allocation below).⁸¹

**TABLE 4-25
CSO (MWC DK)
POTENTIAL ALLOCATION CALCULATION DETAIL**

Line No.	PG&E Electric Gen.	ESP Electric Gen.	Electric Dist.	Gas Dist.	PG&E Gas Supp.	CTA Gas Supp.	Total
1	0.00%	0.00%	56.09%	43.91%	0.00%	0.00%	100.00%

In reviewing these results, it is notable that CTA gas supply is less than 1 percent for this MWC. Given the complexity of this process, PG&E recommends using the 55 percent/45 percent split based on electric and gas distribution customers as it provides comparable results in a more straightforward, less administratively burdensome manner (see recommended allocation below).⁸²

⁸⁰ Exhibit (PG&E-6), WP 4-27, for a crosswalk of non-payment transaction types and their associated utility function categories.

⁸¹ Exhibit (PG&E-6), WP 4-28, for CSO calculation details.

⁸² Exhibit (PG&E-6), WP 4-16, for service agreement counts and percentages.

TABLE 4-26
CSO (MWC DK)
RECOMMENDED ALLOCATION CALCULATION DETAIL

Line No.	PG&E Electric Gen.	ESP Electric Gen.	Electric Dist.	Gas Dist.	PG&E Gas Supp.	CTA Gas Supp.	Total
1	0.00%	0.00%	55.00%	45.00%	0.00%	0.00%	100.00%

2) MWC EZ (Manage Var Cust Care Processes)

The focus of the work under this MWC are back-office activities related to handling payments (e.g., turning cash into and getting change from the SmartSafe, counting and balancing cash drawers, scanning customer checks, and balancing out the received funds in our accounting system). Given these activities are equally available to and/or both benefit electric and gas distribution customers, these costs were allocated according to the percentage of electric and gas service agreements (Category 2; see table below).⁸³

TABLE 4-27
CSO (MWC EZ) ALLOCATION CALCULATION DETAIL

Line No.	PG&E Electric Gen.	ESP Electric Gen.	Electric Dist.	Gas Dist.	PG&E Gas Supp.	CTA Gas Supp.	Total
1	0.00%	0.00%	55.00%	45.00%	0.00%	0.00%	100.00%

3) MWC IU (Collect Revenue)

The focus of the work under this MWC is handling payment-related customer transactions at CSOs and the management of PG&E's network of NPCs. Given these activities are equally available to and/or both benefit electric and gas distribution customers, these costs were allocated according to the percentage of electric and gas service agreements (Category 2; see table below).⁸⁴

⁸³ Exhibit (PG&E-6), WP 4-16, for service agreement counts and percentages.

⁸⁴ Exhibit (PG&E-6), WP 4-16, for service agreement counts and percentages.

**TABLE 4-28
CSOS (MWC IU) ALLOCATION CALCULATION DETAIL**

Line No.	PG&E Electric Gen.	ESP Electric Gen.	Electric Dist.	Gas Dist.	PG&E Gas Supp.	CTA Gas Supp.	Total
1	0.00%	0.00%	55.00%	45.00%	0.00%	0.00%	100.00%

e. Chapter 6 – Billing, Revenue, and Credit

The focus of the work under MWC AR (Read & Investigate Meters), MWC EZ (Manage Var Cust Care Processes), MWC IS (Bill Customers), MWC IT (Manage Credit), and MWC IU (Collect Revenue) is to issue customer bills and notices, process customer payments, conduct credit and collection operational activities, and provide revenue reporting. Given these activities are equally available to and/or both benefit electric and gas distribution customers, these costs were allocated according to the percentage of electric and gas service agreements (Category 2; see table below).⁸⁵

**TABLE 4-29
BRC ALLOCATION CALCULATION DETAIL**

Line No.	PG&E Electric Gen.	ESP Electric Gen.	Electric Dist.	Gas Dist.	PG&E Gas Supp.	CTA Gas Supp.	Total
1	0.00%	0.00%	55.00%	45.00%	0.00%	0.00%	100.00%

f. Chapter 7 – Metering Services and Engineering

Given the focus of most of the work under this chapter is devoted solely to supporting installing, changing, or maintaining electric and gas meters, 100 percent of these costs were assigned to the utility functions in the table below (as outlined in Category 1).

⁸⁵ Exhibit (PG&E-6), WP 4-16, for service agreement counts and percentages.

**TABLE 4-30
METERING SERVICES AND ENGINE**

Line No.	MWC	Utility Function
1	EY (Change/Maint Used Elec Meter)	100 percent Electric Distribution
2	HY (Change/Maint Used Gas Meters)	100 percent Gas Distribution

1 For the remaining work, see the allocations below.

2 **1) MWC EZ (Manage Var Cust Care Processes)**

3 The focus of the costs under this MWC includes oversight of the
4 SmartMeter Opt-Out Program and supplemental utility meter
5 engineering support. Given these activities are equally available to
6 and/or benefit both electric and gas distribution customers, these
7 costs were allocated according to the percentage of electric and gas
8 service agreements (Category 2; see table below).⁸⁶

**TABLE 4-31
METERING SERVICES AND ENGINEERING (MWC EZ) ALLOCATION CALCULATION DETAIL**

Line No.	PG&E Electric Gen.	ESP Electric Gen.	Electric Dist.	Gas Dist.	PG&E Gas Supp.	CTA Gas Supp.	Total
1	0.00%	0.00%	55.00%	45.00%	0.00%	0.00%	100.00%

9 **g. Chapter 8 – Compliance and Regulatory Strategy**

10 **1) MWC EZ (Manage Var Cust Care Processes)**

11 The focus of the work under this MWC is to provide regulatory
12 strategy, risk, compliance, and audit support for the Customer Care
13 organization, and customer and employee privacy, customer
14 experience and insights, and tariff interpretation support for the
15 entire company. Given that this is behind-the-scenes work, which
16 supports customer service activities by the larger Customer Care
17 organization (as captured in other MWCs in this section related to
18 customer-facing work), these costs were allocated according to

⁸⁶ Exhibit (PG&E-6), WP 4-16, for service agreement counts and percentages.

1 the percentage of electric and gas service agreements (Category 4;
2 see table below).⁸⁷

**TABLE 4-32
COMPLIANCE AND REGULATORY STRATEGY (MWC EZ) ALLOCATION
CALCULATION DETAIL**

Line No.	PG&E Electric Gen.	ESP Electric Gen.	Electric Dist.	Gas Dist.	PG&E Gas Supp.	CTA Gas Supp.	Total
1	0.00%	0.00%	55.00%	45.00%	0.00%	0.00%	100.00%

3 **2) MWC OM (Operational Management)**

4 The focus of the work under this MWC is to provide supervision
5 and management support, including administrative staff, for all the
6 Customer Care line of business. Given that this is
7 behind-the-scenes work, which supports customer service activities
8 by the larger Customer Care organization (as captured in other
9 MWCs in this section related to customer-facing work), these costs
10 were allocated according to the percentage of electric and gas
11 service agreements (Category 4; see table below).⁸⁸

**TABLE 4-33
COMPLIANCE AND REGULATORY STRATEGY (MWC OM) ALLOCATION
CALCULATION DETAIL**

Line No.	PG&E Electric Gen.	ESP Electric Gen.	Electric Dist.	Gas Dist.	PG&E Gas Supp.	CTA Gas Supp.	Total
1	0.00%	0.00%	55.00%	45.00%	0.00%	0.00%	100.00%

12 **h. Chapter 9 – AMI Gas Module Mass Replacement**

13 Given the focus of the work under this chapter is devoted solely to
14 supporting the replacement of gas meters, 100 percent of these costs
15 were assigned to gas distribution (as outlined in Category 1).

⁸⁷ Exhibit (PG&E-6), WP 4-16, for service agreement counts and percentages.

⁸⁸ Exhibit (PG&E-6), WP 4-16, for service agreement counts and percentages.

**TABLE 4-34
AMI GAS MODULE MASS REPLACEMENT MWCS**

Line No.	MWC	Utility Function
1	EZ (Manage Var Cust Care Processes)	100 percent Gas Distribution
2	HY (Change/Maint Used Gas Meters)	100 percent Gas Distribution
3	IS (Bill Customers)	100 percent Gas Distribution
4	JV (Maintain IT Apps & Infra)	100 percent Gas Distribution

i. Chapter 10 – Customer Care Technology Projects

The focus of the work under MWC JV (Maintain IT Apps & Infra) is to oversee Customer Care technology projects. Given that this is behind-the-scenes work, which supports customer service activities by the larger Customer Care organization (as captured in other MWCs in this section related to customer-facing work), these costs were allocated according to the percentage of electric and gas service agreements (Category 4; see table below).⁸⁹

**TABLE 4-35
CUSTOMER CARE TECHNOLOGY PROJECTS
ALLOCATION CALCULATION DETAIL**

Line No.	PG&E Electric Gen.	ESP Electric Gen.	Electric Dist.	Gas Dist.	PG&E Gas Supp.	CTA Gas Supp.	Total
1	0.00%	0.00%	55.00%	45.00%	0.00%	0.00%	100.00%

F. Cost Tables

Table 4-36 shows the 2016-2020 recorded expense costs and 2021-2023 expense forecast by MWC. Table 4-37 shows the 2016-2020 recorded expense costs and 2021-2023 expense forecasts by MAT code.

⁸⁹ Exhibit (PG&E-6), WP 4-16, for service agreement counts and percentages.

TABLE 4-36
CONTACT CENTERS, CUSTOMER TECHNOLOGY, AND EXPENSES BY MWC
(THOUSANDS OF NOMINAL DOLLARS)

Line No.	MWC	Description	2016 Recorded Adjusted	2017 Recorded Adjusted	2018 Recorded Adjusted	2019 Recorded Adjusted	2020 Recorded Adjusted	2021 Forecast	2022 Forecast	2023 Forecast	Workpaper Reference
1	DK	Manage Customer Inquiries	\$63,072	\$71,116	\$56,033	\$57,785	\$58,992	\$57,493	\$59,496	\$60,166	WP 4-1, line 1
2	EZ	Manage Var Cust Care Processes	3,876	3,273	3,284	2,580	3,872	4,884	5,028	7,362	WP 4-1, line 2
3	IS	Bill Customers	—	224	154	14	4	—	—	—	WP 4-1, line 3
4	Total		\$66,948	\$74,612	\$59,470	\$60,380	\$62,868	\$62,377	\$64,524	\$67,528	WP 4-1, line 5

TABLE 4-37
CONTACT CENTERS, CUSTOMER TECHNOLOGY, AND EXPENSES BY MAT CODE
(THOUSANDS OF NOMINAL DOLLARS)

Line No.	MWC	MAT Code	Description	2016 Recorded Adjusted	2017 Recorded Adjusted	2018 Recorded Adjusted	2019 Recorded Adjusted	2020 Recorded Adjusted	2021 Forecast	2022 Forecast	2023 Forecast	Workpaper Reference
1	DK	DKB	CCO Live Agent	\$60,047	\$55,316	\$51,344	\$51,340	\$52,659	\$57,493	\$59,496	\$60,166	WP 4-3, line 1
2		DKF	CCO Technology	2,550	6,909	6,867	6,446	6,330	-	-	-	WP 4-3, line 2
3		#	Not assigned	475	8,891	(2,178)		3	-	-	-	WP 4-3, line 3
4	DK Total			\$63,072	\$71,116	\$56,033	\$57,785	\$58,992	\$57,493	\$59,496	\$60,166	WP 4-3, line 4
5	EZ	#	Not assigned	\$3,876	\$3,273	\$3,284	\$2,580	\$3,872	\$4,884	\$5,028	\$7,362	WP 4-3, line 5
6	EZ Total			\$3,876	\$3,273	\$3,284	\$2,580	\$3,872	\$4,884	\$5,028	\$7,362	WP 4-3, line 6
7	IS	#	Not assigned		224	154	14	4	-	-	-	WP 4-3, line 7
8	IS Total				224	154	14	4	-	-	-	WP 4-3, line 8
9	Total			\$66,948	\$74,612	\$59,470	\$60,380	\$62,868	\$62,377	\$64,524	\$67,528	WP 4-3, line 9

(PG&E-6)

**PACIFIC GAS AND ELECTRIC COMPANY
2023 GENERAL RATE CASE**

Testimony X Workpapers SOQ

Exhibit Number: 6 Chapter Number: 4

Chapter Title: Contact Centers, Customer Technology, and Digital Strategy

Witness Name: Matt Briel

Page No.	Line No.	Item	As Filed	As Corrected
Errata as of November 5, 2021				
4-2	lines 4-5	Summary of Request	This expense forecast is \$3.7 million (5.9 percent) higher than 2020 recorded costs.	This expense forecast is \$4.7 million (7.4 percent) higher than 2020 recorded costs.
4-2	lines 5-8	Summary of Request	The major drivers of the increase are \$6.1 million due to escalation, \$2.8 million due to a new dedicated continuous website improvement team, and \$0.7 million for Digital Strategy and Customer Care Technology's reduced chargebacks to other departments.	The major drivers of the increase are \$6.0 million due to escalation, \$2.8 million due to a new dedicated continuous website improvement team, and \$0.6 million for Digital Strategy and Customer Care Technology's reduced chargebacks to other departments.
4-2	lines 8-12	Summary of Request	These increases were offset by a \$5.8 million reduction due to temporarily reduced call volumes associated with PG&E's service disconnection moratorium between 2020-2021 and a \$1.5 million reduction due to enhancements to Interactive Voice Response (IVR) functionality.	These increases were offset by a \$3.1 million reduction due to temporarily reduced call volumes associated with PG&E's service disconnection moratorium between 2020- 2021 and a \$1.5 million reduction due to enhancements to Interactive Voice Response (IVR) functionality.

PACIFIC GAS AND ELECTRIC COMPANY
CHAPTER 5
CUSTOMER SERVICE OFFICES

PACIFIC GAS AND ELECTRIC COMPANY
CHAPTER 5
CUSTOMER SERVICE OFFICES

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PACIFIC GAS AND ELECTRIC COMPANY

CHAPTER 5

CUSTOMER SERVICE OFFICES

A. Introduction

1. Scope and Purpose

This chapter demonstrates that Pacific Gas and Electric Company's (PG&E) expense and capital forecasts for its Customer Service Offices (CSO) organization are reasonable and should be approved.

The CSOs process in-person payments and certain non-payment transactions, such as starting or stopping service, scheduling service appointments, and making payment arrangements. PG&E operates 65 CSOs¹ in communities throughout PG&E's service territory that are operated and staffed by employees who primarily take payments from customers.² In addition, the CSO organization manages 619 Neighborhood Payment Centers (NPC) that are owned and operated by third parties and authorized to collect and process in-person payments.³

Adoption of the CSO forecasts will enable PG&E to maintain adequate staffing levels and provide effective customer service and support.

2. Summary of Request

a. Expense

PG&E requests approval of its 2023 expense forecast of \$18.0 million for the CSO organization.⁴ This is \$4.5 million higher than 2020 recorded costs of \$13.5 million.⁵ The increase is primarily attributable to hiring new Customer Service Representatives (CSR) to replace those who left through attrition while the offices temporarily had to close due to the coronavirus (COVID-19) pandemic in 2020.

¹ Exhibit (PG&E-6), WP 5-10 for a list of the CSOs.

² All CSOs have been temporarily closed since mid-March 2020 due to COVID-19 restrictions.

³ Total number of NPCs as of May 2021.

⁴ Exhibit (PG&E-6), WP 5-1, lines 1-4 for actual and forecast expenses.

⁵ Exhibit (PG&E-6), WP 5-1, line 4.

b. Capital

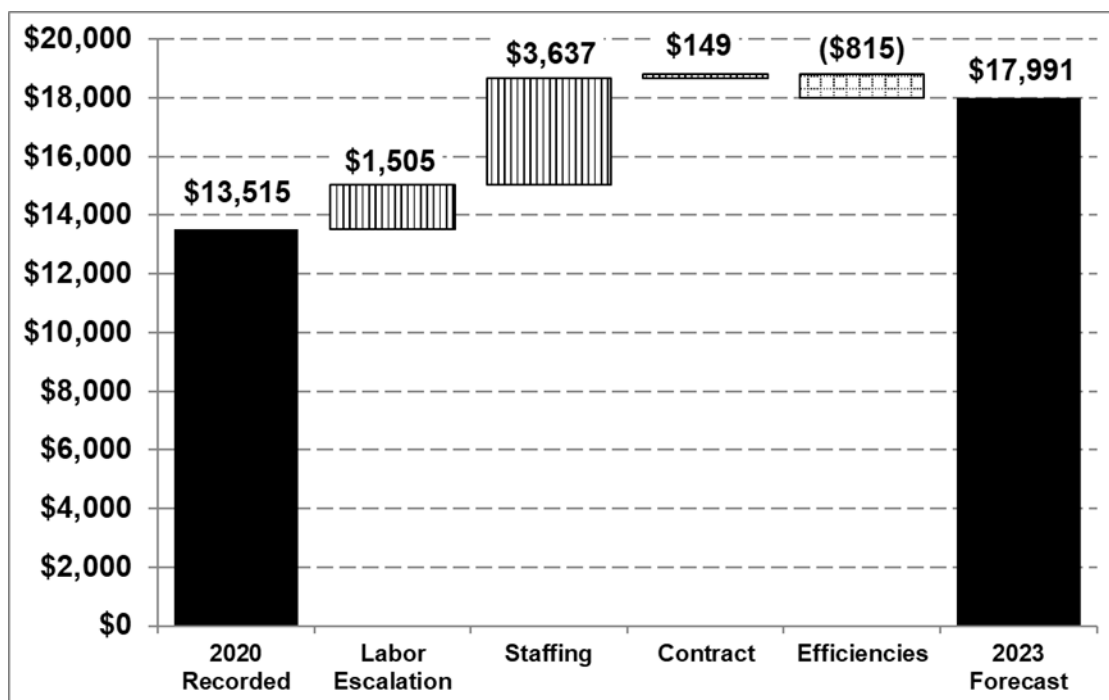
PG&E requests approval of a capital expenditure forecast of \$0.1 million per year for the 2023-2026 period, primarily for lifecycle replacements of equipment due to normal wear and tear.⁶ In 2020, PG&E recorded \$0.02 million for replacement of equipment, such as safes, cash counters, and desk chairs, prior to closing the offices due to the COVID-19 pandemic.⁷

3. Overview of Recorded and Forecast Costs

a. Expense

Figure 5-1 below shows the cost drivers between 2020 recorded costs and the 2023 expense forecast. These drivers are described in Section B.3.a.

**FIGURE 5-1
CUSTOMER SERVICE OFFICES
EXPENSE WALK (2020-2023)
(THOUSANDS OF NOMINAL DOLLARS)**



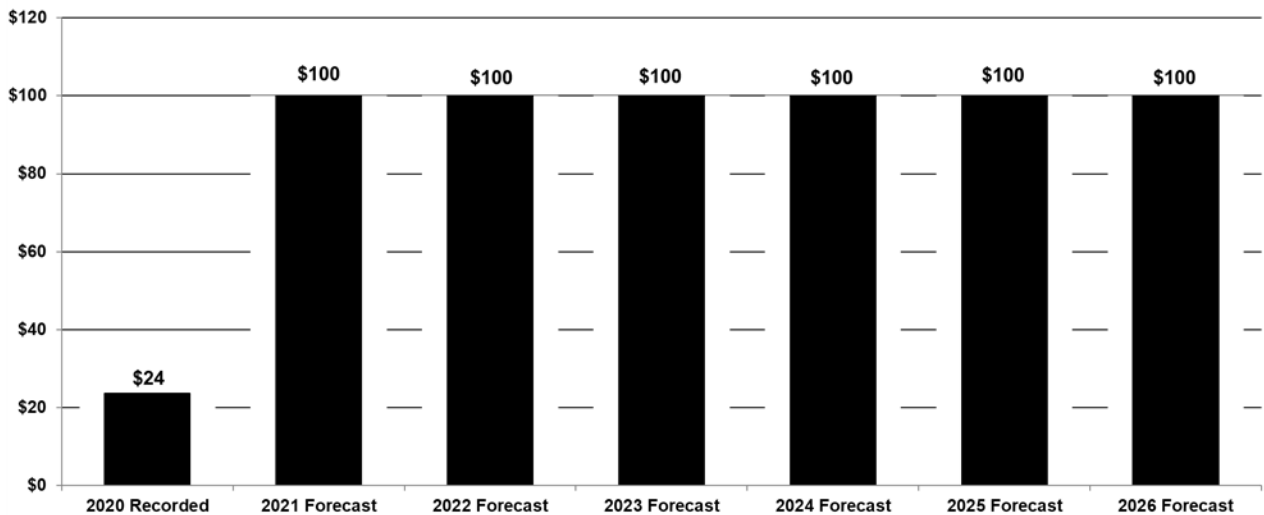
⁶ Exhibit (PG&E-6), WP 5-4, line 3 for forecast capital.

⁷ Exhibit (PG&E-6), WP 5-3, line 2.

b. Capital

Figure 5-2 below shows the 2020 recorded costs and 2021-2026 forecasted capital expenditures. The drivers of change to PG&E's 2020 capital forecast are described in Section B.3.b.

**FIGURE 5-2
CUSTOMER SERVICE OFFICES
CAPITAL EXPENDITURES AND FORECAST (2020-2026)
(THOUSANDS OF NOMINAL DOLLARS)**



4. Support for Request

PG&E's expense and capital forecasts for CSOs are reasonable and should be adopted. CSOs handle approximately 2.8 million transactions annually, and process both payments and non-payment transactions, such as starting or stopping service, scheduling service appointments, and making payment arrangements.⁸ The requested forecast will allow PG&E to maintain service levels at CSOs and manage PG&E's network of NPCs.

5. Organization of the Remainder of This Chapter

The remainder of this chapter is organized as follows:

- Section B – Program Overview;
- Section C – Activities and Costs by Major Work Category (MWC);
- Section D – Estimating Method; and

⁸ Exhibit (PG&E-6), WP 5-14 for total of 2019 transactions.

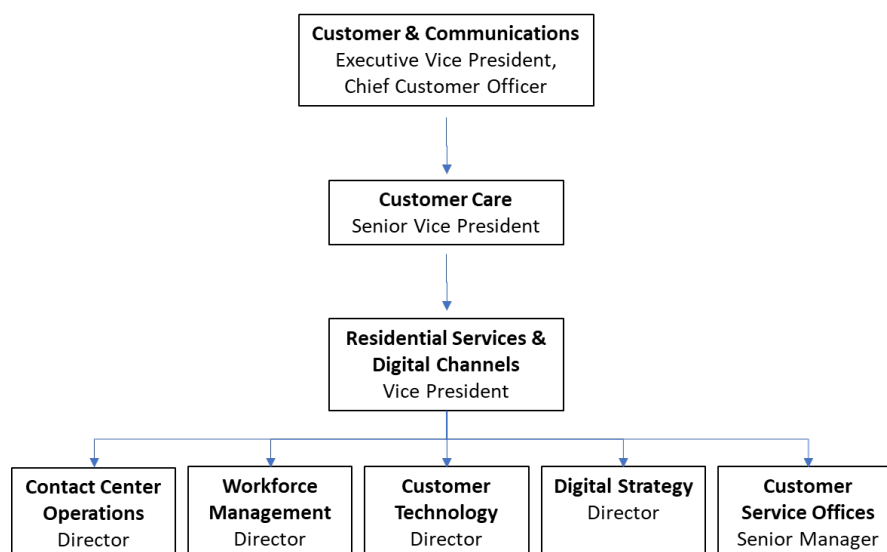
- Section E – Cost Tables.

B. Program Overview

1. Management Structure

PG&E re-structured its Customer Care organization in March 2020 to better align customer service and support resources. With this change, PG&E established a Residential Services and Digital Channels team that is responsible for providing customer service for our residential customers, which includes the Contact Centers, CSOs, and digital and technology strategy. This organizational structure is shown in Figure 5-3 below.

**FIGURE 5-3
CUSTOMER SERVICE OFFICES ORGANIZATIONAL STRUCTURE**



2. Program Description

PG&E's CSRs serve customers throughout the 65 CSOs located throughout PG&E's service territory every weekday from 8:30 a.m. – 5 p.m. Customers may interact directly with CSRs to make payments on their PG&E accounts or request other services, such as starting or stopping service, scheduling service appointments, and making payment arrangements. CSRs also provide information to customers on services, programs, and a variety of safety topics.

Due to health and safety precautions, PG&E temporarily closed all of its CSOs in March 2020 in response to the COVID-19 pandemic. However, all

1 transactions completed at the CSO can also be completed using other
2 channels, including via phone, online, mail, and NPCs.

3 CSOs received and processed approximately 2.6 million payments in
4 2019, which is the most recent year with complete data due to the temporary
5 closure of all PG&E's CSOs in response to the COVID-19 pandemic. The
6 2019 total of 2.6 million payments represents a reduction of more than
7 284,000 payments compared to 2017.⁹ Payment and non-payment
8 transaction volume have decreased year over year from 2017 through
9 2019.¹⁰

10 The most frequented CSOs process approximately 100,000 payments
11 annually, while those less frequented process fewer than 7,000 payments
12 per year.¹¹ In 2019, payments made up 93 percent of the total transactions
13 handled by PG&E's 65 CSOs. The remaining 7 percent consisted primarily
14 of non-payment transactions, such as starting and stopping service, service
15 appointments, and payment arrangements.¹²

16 **3. 2023 Forecast**

17 **a. Expense Drivers**

18 **1) Staffing**

19 The CSO organization forecasts a \$3.6 million increase in
20 staffing costs that would enable it to hire and train additional
21 employees. PG&E reduced staffing by declining to backfill positions
22 due to its Chapter 11 bankruptcy and uncertainty associated with
23 the COVID-19 pandemic. This increase in staffing would allow
24 CSOs to maintain reasonable and consistent hours of operation.
25 CSO staffing is directly correlated to the hours that the CSOs can

⁹ Exhibit (PG&E-6), WP 5-11 for the total number of payments handled in each CSO from 2017-2020.

¹⁰ Exhibit (PG&E-6), WP 5-12 to WP 5-14, for the total number of payment and non-payment transactions from 2017-2019. PG&E also includes partial transaction data for 2020 in WP 5-15.

¹¹ Exhibit (PG&E-6), WP 5-11 for the total number of payments handled in each CSO from 2017-2020.

¹² Exhibit (PG&E-6), WP 5-14 for CSO payments compared to non-payment transactions in 2019.

remain open—when CSOs are inadequately staffed, PG&E is either forced to reduce business hours or temporarily close locations if employees are unable to work (e.g., due to illness). Since closures require customers to return to the CSO at a different date and time, they often disrupt and dissatisfy customers.

Table 5-1 shows the impact of CSO staffing on hours of operation and customer complaints:

TABLE 5-1
2018-2019 CSO STAFFING AND CLOSURES

Line No	Detail	2018	2019	% Change
1	Full-Time Equivalents (FTE)	197	169	-14%
2	Hours CSOs Closed During Business Hours	5,741	9,318	+62%
3	Customer Complaints About CSOs Being Closed	76	135	+78%

Note: Exhibit (PG&E-6), WP 5-23 to 5-25, for additional information regarding staffing levels, office closure hours, and customer complaints regarding office closures.

As discussed, fewer FTEs mean lower hours of operation, which directly results in higher customer complaints. PG&E's forecasted increase would allow CSO hours of operation to meet customers' expectations for effective service and support.

2) Labor Escalation

CSO forecasts \$1.5 million in labor escalation for 2023.¹³

PG&E's labor escalation rates are discussed in Exhibit (PG&E-8), Chapter 4.

3) Contracts

CSO forecasts \$0.15 million in contracts to manage its network of NPCs which are authorized to collect and process customer walk-in payments.

¹³ Exhibit (PG&E-6), WP 5-17, lines 1-4 for more information on CSO labor escalation.

4) Efficiencies

CSO also forecasts a \$0.82 million reduction in 2023 from various cost reductions and operational efficiencies.¹⁴ A portion of these efficiencies is due to CSO charging back to other PG&E departments for whom they have completed work.

b. Capital Drivers

1) Lifecycle Replacement of Equipment

PG&E forecasts \$0.1 million per year for 2021-2026 for lifecycle replacement of equipment such as safes, cash counters, and desk chairs.¹⁵

Lifecycle replacement of equipment is an essential component of the CSOs' operations and needs to be addressed on an ongoing basis due to normal wear and tear of equipment. This equipment must be in operable condition, so that CSRs can safely, effectively, and efficiently meet customer needs.

C. Activities and Costs by MWC

The activities and expenses described in this chapter have been categorized into three expense MWCs and one capital MWC, as discussed in further detail below.

1. Expense MWCs

a. MWC DK (Manage Customer Inquiries)

PG&E's 2023 forecast of \$1.2 million for MWC DK provides customer support for non-payment transactions at CSOs. These non-payment transactions include starting and stopping service, service appointments, and payment arrangements.

b. MWC EZ (Manage Various Customer Care Processes)

PG&E's 2023 forecast of \$6.5 million for MWC EZ supports various customer service processes and activities at CSOs. These processes consist of all back-office activities related to the handling of payments

¹⁴ Exhibit (PG&E-6), WP 5-6, lines 7-10; WP 5-8, lines 9-12.

¹⁵ Exhibit (PG&E-6), WP 5-18 for historical CSO equipment costs.

such as turning cash into the CSO's safe, getting change from the safe as needed, and counting and balancing cash drawers each day. In addition, this includes scanning customer checks into the banking system, verifying cash drawers and change fund amounts, and accounting for funds received in PG&E's billing system.

c. MWC IU (Collect Revenue)

PG&E's 2023 forecast of \$10.2 million for MWC IU supports PG&E's payment processing activities at CSOs. This includes processing in-person customer check and cash payments made at one of PG&E's 65 CSOs locations. In addition, this process supports the management of PGE's network of NPCs which are authorized to collect and process customers' walk-in payments.

2. Capital MWCs

a. MWC 21 (Miscellaneous Capital)

PG&E's 2021-2026 annual forecast of \$0.1 million for MWC 21 supports the replacement of office equipment such as safes, cash counters, and desk chairs due to normal wear and tear. MWC 21 also includes the cost of replacing front counters and remodeling lobbies in various CSO facilities.

D. Estimating Method

PG&E's 2023 CSO expense forecast was developed using recorded 2020 expenses as a base. These recorded adjusted expenses were adjusted for labor and non-labor escalation, consistent with escalation rates described in Exhibit (PG&E-8), Chapter 4 and Exhibit (PG&E-12) Chapter 3, respectively. Further adjustments were made to reflect changes in program activity as described elsewhere in this chapter.

E. Cost Tables

PG&E's forecast for CSOs is summarized in the following tables:

- Table 5-2 shows 2016 through 2020 recorded adjusted expenses and 2021 through 2023 forecast expenses by MWC; and
- Table 5-3 shows 2016 through 2020 recorded adjusted capital expenditures and 2021 through 2026 forecast capital expenditures by MWC.

TABLE 5-2
CUSTOMER SERVICE OFFICES
EXPENSES BY MWC
(THOUSANDS OF NOMINAL DOLLARS)

Line No.	MWC	Description	Recorded Adjusted					Forecast			Workpaper Reference
			2016	2017	2018	2019	2020	2021	2022	2023	
1	DK	Manage Customer Inquiries	\$1,536	\$1,331	\$1,303	\$1,249	\$906	\$1,273	\$1,206	\$1,249	WP 5-1, line 1
2	EZ	Manage Var Cust Care Processes	8,266	8,483	7,586	6,218	4,949	7,266	6,322	6,543	WP 5-1, line 2
3	IU	Collect Revenue	10,370	9,493	9,848	10,287	7,660	8,831	10,441	10,199	WP 5-1, line 3
4		Total	\$20,172	\$19,307	\$18,737	\$17,754	\$13,515	\$17,371	\$17,969	\$17,991	WP 5-1, line 4

TABLE 5-3
CUSTOMER SERVICE OFFICES
CAPITAL EXPENDITURES BY MWC
(THOUSANDS OF NOMINAL DOLLARS)

Line No.	MWC	MAT	MAT Description	Recorded Adjusted				Forecast						Workpaper Reference	
				2016	2017	2018	2019	2020	2021	2022	2023	2024	2025		2026
1	21	#	Not assigned	\$1,038	\$84	\$179	\$1	\$24	\$100	\$100	\$100	\$100	\$100	\$100	WP 5-3, line 1
2			Grand Total	\$1,038	\$84	\$179	\$1	\$24	\$100	\$100	\$100	\$100	\$100	\$100	WP 5-3, line 2

PACIFIC GAS AND ELECTRIC COMPANY
CHAPTER 6
BILLING, REVENUE, AND CREDIT
[INCLUDES NOVEMBER 5, 2021 ERRATA]

PACIFIC GAS AND ELECTRIC COMPANY
CHAPTER 6
BILLING, REVENUE, AND CREDIT

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PACIFIC GAS AND ELECTRIC COMPANY
CHAPTER 6
BILLING, REVENUE, AND CREDIT

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PACIFIC GAS AND ELECTRIC COMPANY
CHAPTER 6
BILLING, REVENUE, AND CREDIT

A. Introduction

1. Scope and Purpose

This chapter demonstrates that Pacific Gas and Electric Company's (PG&E) expense and capital forecasts for Billing, Revenue, and Credit (BRC) are reasonable and should be approved.

Three PG&E departments are primarily responsible for BRC: Billing Operations, Revenue Operations, and Credit Operations. Together, these departments primarily issue customer bills and notices, process payments and billing exceptions, conduct credit and collection activities, remit customer billed taxes and fees, perform reconciliation of customer payments and report revenue.

Adoption of BRC's forecast will ensure PG&E's ability to efficiently manage its BRC operations, comply with regulatory and legislative mandates, and respond to customers' interest in new products and services.

2. Summary of Request

a. Expense

PG&E requests that the California Public Utilities Commission (CPUC or Commission) adopt its 2023 expense forecast of \$73.5 million for BRC. This is \$9.0 million (14 percent) higher than 2020 recorded costs of \$64.5 million.¹ The increase is primarily attributable to the resumption of collection activities following the expiration of the moratorium on disconnections adopted in Rulemaking (R.) 18-03-011.²

b. Capital

PG&E is not requesting any capital for BRC activities in 2023-2026. However, PG&E forecasts \$4.0 million in capital for 2021 to replace

¹ Exhibit (PG&E-6), WP 6-1, line 6.

² See Resolution (Res.) M-4842 (Issued April 17, 2020), p. 12, Ordering Paragraph (OP) 1, and Res.M-4849 (Issued February 12, 2021), p. 33, OP 1.

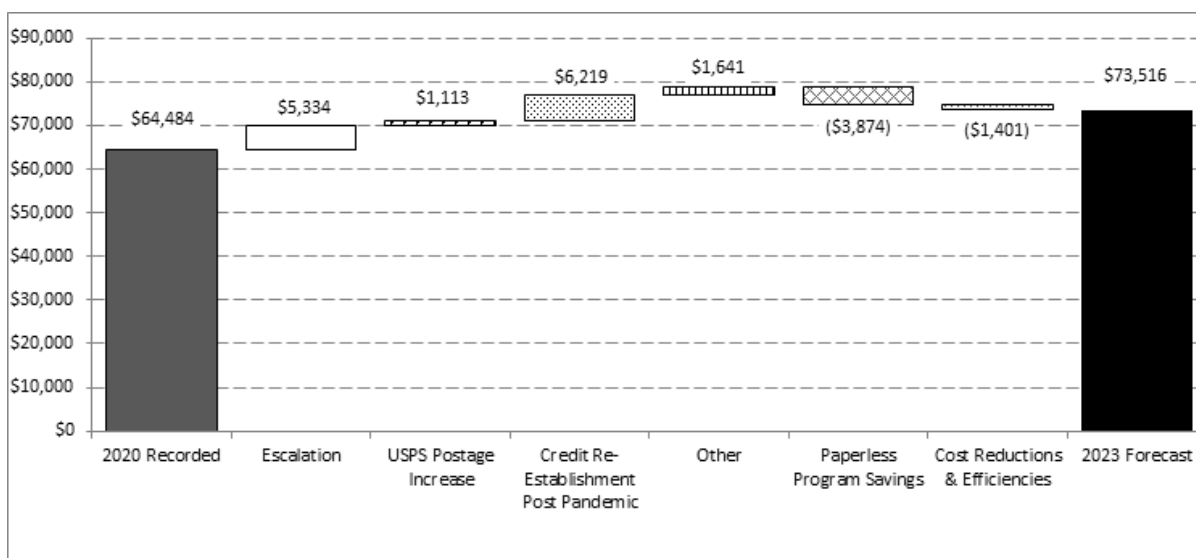
equipment used to insert and mail customer bills and notices.³ This replacement will support PG&E's ability to send information to customers in a timely manner. PG&E includes its 2021 capital forecast for awareness and is not seeking additional recovery.

3. Overview of Recorded and Forecast Costs

a. Expense

Figure 6-1 below shows the change from PG&E's 2020 recorded expenses to its 2023 forecast. The activities that form the basis for PG&E's expense forecast and drivers of variances are described in Section B.3.

**FIGURE 6-1
BILLING, REVENUE, AND CREDIT
EXPENSE WALK (2020-2023)
(THOUSANDS OF NOMINAL DOLLARS)**

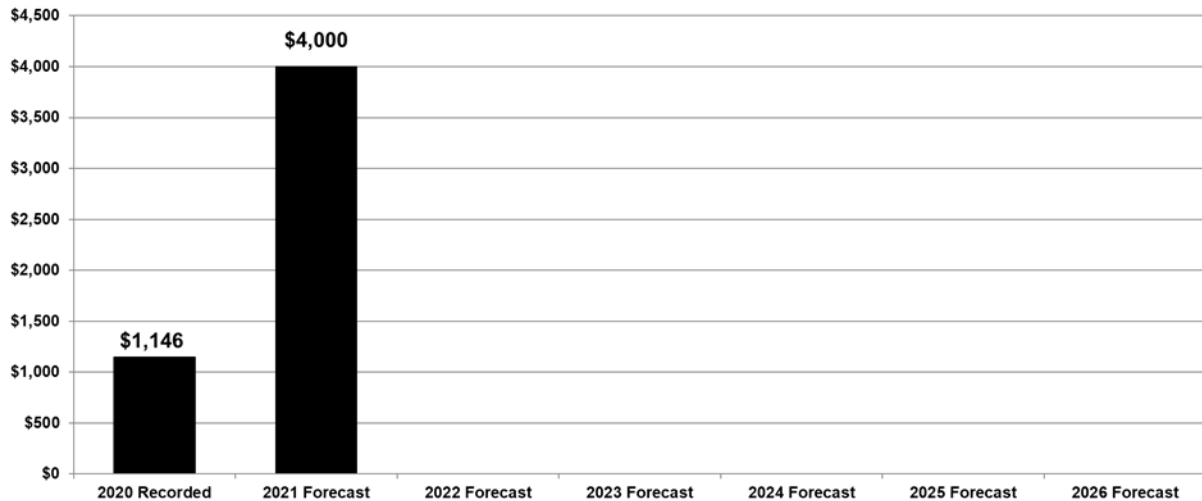


b. Capital

Figure 6-2 shows BRC's 2020 recorded costs and 2021-2026 forecasted expenditures. PG&E is not requesting any capital for BRC activities in 2023-2026.

³ Exhibit (PG&E-6), WP 6-3, line 1; and WP 6-19.

FIGURE 6-2
BILLING, REVENUE, AND CREDIT
CAPITAL EXPENDITURES AND FORECAST (2020-2026)
(THOUSANDS OF NOMINAL DOLLARS)



4. Support for Request

PG&E's expense and capital forecasts are reasonable because they:

- Support billing, credit and revenue activities that enable PG&E to render timely bills, collect payments from customers, and report revenue;
- Enable PG&E to comply with regulatory and legislative mandates; and
- Allow PG&E to quickly respond to customers' interest in new products and services.

5. Organization of the Remainder of This Chapter

The remainder of this chapter is organized as follows:

- Section B – Program Overview
- Section C – Activities and Costs by Major Work Category (MWC)
- Section D – Estimating Method
- Section E – Compliance with Prior Commission Decisions
- Section F – Cost Tables

B. Program Overview

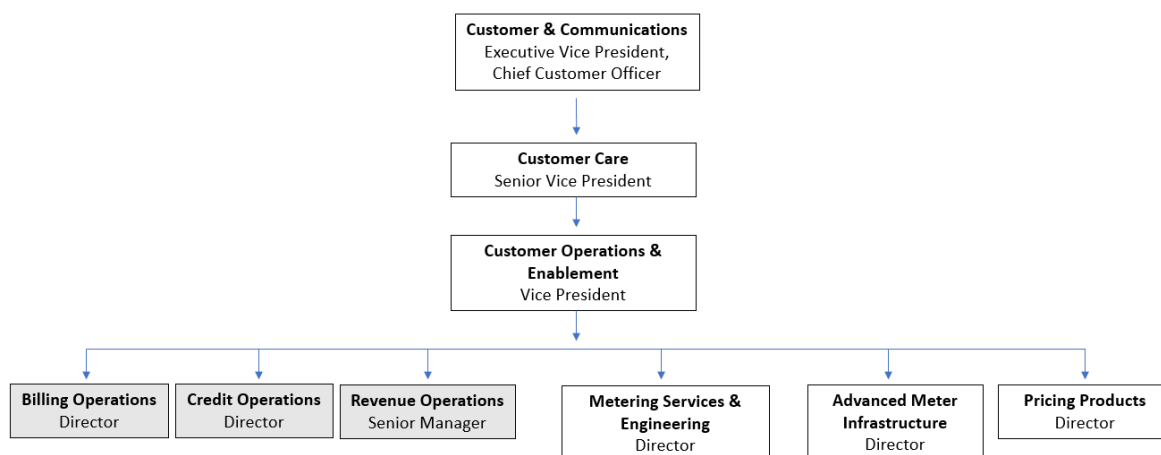
1. Management Structure

PG&E restructured its Customer Care organization in March 2020 to better align customer service and support resources. With this change, PG&E established a Customer Operations and Enablement team that is

responsible for meter testing, customer billing, payment processing, credit and collection policy, pricing strategy, and implementation and operations. The Customer Operations and Enablement team reports to the Senior Vice President (SVP) of Customer Care. The SVP of Customer Care reports to the Executive Vice President (EVP) of Customer and Communications who is also PG&E's Chief Customer Officer. PG&E established the EVP position in 2021 as described further in Exhibit (PG&E-6), Chapter 1.

The BRC organization addressed in this chapter consists of the three shaded areas shown in Figure 6-3, "Billing Operations, Credit Policy, and Operations, and Revenue Operations."

**FIGURE 6-3
BILLING, REVENUE, AND CREDIT ORGANIZATIONAL STRUCTURE**



In addition to these organizations, costs associated with work performed by groups outside of BRC are also presented in this chapter because these groups provide functions that support billing and collections. This includes the field collections function performed in the Electric Operations and Gas Operations organizations.

2. Program Description

Table 6-1 below outlines the departments within each organization and the MWCs associated with their activities. PG&E describes these activities in further detail below.

**TABLE 6-1
DEPARTMENT MAPPING TO ORGANIZATION
FOR BILLING, REVENUE, AND CREDIT**

Line No.	Organization	Departments	MWC
1	Billing Operations	Billing Operations Exceptions Business Delivery Complex Billing Billing Systems and Analytics Printing and Bill Presentment	MWC IS, AR MWC IS MWC IS, AR, EZ MWC IS MWC IS, IT, EZ, 21
2	Revenue Operations	Revenue and Statistics	MWC IS, IU
3	Credit Policy and Operations	Credit Operations Customer Revenue Processing (CRP)	MWC IT, IS MWC IU, EZ
4	Gas and Electric Operations	Field Collections	MWC IT

a. Billing Operations Exceptions

Billing Operations Exceptions activities include support for billing exceptions processing, account maintenance, and customer-initiated request processing as described in further detail below:

- Billing exceptions processing:
 - Validating, processing, and correcting reads from PG&E's Advanced Metering Infrastructure (AMI) network;
 - Reviewing and correcting bills that fail billing system parameters resulting in manual intervention; and
 - Reviewing and correcting requests generated by third parties for Direct Access (DA), Core Transport Agent (CTA), and Community Choice Aggregation customers.
- Account maintenance:
 - Completing orders for customers who have moved;
 - Initiating and maintaining service for residential Net Energy Metering (NEM) customers; and
 - Processing adjustments for inaccurate meters.
- Customer-initiated requests:
 - Processing rate changes; establishing or terminating landlord agreements, processing customer requests to opt out of electric

or gas AMI, processing medical baseline allotment requests,
and California Alternate Rates for Energy (CARE) adjustments.

b. Business Delivery

Business Delivery supports process documentation, communication, training, and quality assurance (QA) reviews; developing metrics to track Billing Operations performance; compliance monitoring and reporting; and budget and resource forecasting for Billing Operations.

c. Complex Billing

Complex Billing calculates bills for customers receiving service under complex rate schedules and/or programs that are not supported by PG&E's customer information system, such as:

- Calculating electric bills for the largest bundled commercial electric customers (Schedules E-19/E-20), DA customers receiving service under consolidated bill service, and bundled electric customers on specialized tariffs (e.g., non-firm, standby, electric vehicle, departed load, and demand response programs);
- Account setup and billing for approximately 70,000 NEM customers and the various Complex Billing programs associated with these customers; and
- Account setup and billing for non-core, CTA, backbone transmission gas customers, and natural gas vehicle program customers.

d. Billing System and Analytics

Billing System and Analytics supports technology enhancements and serves as the business liaison for Information Technology (IT) work related to PG&E's customer information system, Advance Billing Solution (ABS),⁴ AMI, and work management system (Salesforce), which is used to distribute work within Billing Operations Exceptions.

⁴ ABS is utilized for complex billing solutions, such as NEM for commercial customer customers, non-AMI billing that requires interval data, and standby or transmission billing.

e. Printing and Bill Presentment

Printing and Bill Presentment is responsible for the following activities:

- Printing bills, inserting them into envelopes, and mailing them to customers. In 2020, PG&E produced approximately 43.3 million paper bills, 900 Braille bills, and 9,000 large font bills;
- Printing, inserting, and mailing delinquency notices to customers;
- Managing electronic bill presentment for paperless billing customers. PG&E provided customers with 32.8 million electronic bills in 2020, a 39 percent increase from 2017; and
- Inserting and mailing approximately 5.7 million miscellaneous mail pieces, including customer correspondence (e.g., notifications, customer refunds) and employee related payroll.

f. Revenue and Statistics

Revenue and Statistics supports revenue reporting, cash management, and remittance of taxes and fees;⁵ the monthly closing revenue process, reconciling PG&E's primary customer depository bank accounts, managing customer refunds; reconciling daily cash receipts; and QA testing prior to implementation of new rates and bill credits within the customer information system.

g. Credit Policy and Operations

Credit Policy and Operations collects past-due balances from customers to manage financial risk to PG&E and minimize the amount of uncollectibles recovered from PG&E's other customers in rates. Credit manages delinquent accounts receivable for active residential and non-residential accounts and implements recovery strategies on closed accounts.

h. Field Collections

Field Collections performs in-field service disconnections due to non-payment of bills after all attempts to collect have been exhausted and where remote disconnect capability is not available.

⁵ For example, this includes the Utility User's Tax, annual franchise fees, franchise fee surcharges, and city franchise surcharges.

i. Customer Revenue Processing

Customer Revenue Processing (CRP) processes payments received via the United States Postal Service (USPS). In 2020, CRP processed 13.3 million payments for a combined amount of \$7.5 billion, of which 93.9 percent was processed and posted to customer accounts on the same day received. In addition, CRP researches and resolves payment-related customer inquiries. In 2020, CRP resolved approximately 150,000 payment inquiries.

3. 2023 Forecast Drivers

a. Resumption of Collection Activities Following the Expiration of Coronavirus (COVID-19) Customer Protections

PG&E forecasts a \$6.2 million increase in 2023 expense compared to 2020 recorded costs due to the resumption of collection activities in mid-2021, including the production and mailing of credit notices, outbound collection calls, handling of customer credit inquiries, and credit related service disconnections and restorations.⁶

In March 2020, as directed by the Commission, PG&E implemented a moratorium on disconnections for residential and small business customers to support customers during the COVID-19 pandemic. This also included suspending mailing credit notices and conducting outbound credit calls for collection purposes. The Commission later extended the moratorium on disconnections through June 30, 2021.⁷

Due to the moratorium, PG&E's recorded 2020 expense associated with certain Credit activities was significantly reduced, specifically because service disconnections and reconnections for nonpayment and broken locks⁸ were no longer being performed, credit notices were no longer being printed and mailed, and outbound calls specific to notifying

⁶ Exhibit (PG&E-6), WP 6-18, line 5.

⁷ Res.M-4849 (Issued February 12, 2021), p. 33, OP 1.

⁸ Credit Operations monitors energy usage on meters without a responsible party recorded as receiving service, known as a "broken lock" condition. When detected, PG&E shuts off service at the meter until a responsible party assumes service.

1 customers of a pending non-payment service disconnection were no
2 longer being conducted.

3 PG&E's 2023 expense forecast for resuming credit- activities
4 consists of a \$0.2 million increase to MWC IS for broken lock
5 investigation and resolution, a \$0.4 million increase to MWC IU for
6 payment research and processing activities, and a \$5.6 million increase
7 in MWC IT for general credit operations, including energy and
8 non-energy collection activities, third-party collection agency fees, field
9 non-pay service disconnect and reconnect expenses, and credit notice
10 postage and mailing services. PG&E's 2023 expense forecast is
11 consistent with its 2018 expenditures, which reflects normal course of
12 operations,⁹ and includes the resumption of disconnections and
13 collection activities following the expiration of the moratorium on
14 disconnections adopted in R.18-03-011. The majority of the cost
15 increase occurs in 2021 and 2022 as Credit activities resume. PG&E is
16 only forecasting escalation increases in 2023.¹⁰

17 **b. Labor Escalation**

18 PG&E forecasts \$5.3 million in labor and non-labor escalation from
19 2020 base labor and non-labor costs.¹¹ The forecast is based on labor
20 escalation rates discussed in Exhibit (PG&E-8), Chapter 7 and non-labor
21 escalation rates in Exhibit (PG&E-12), Chapter 3.

22 **c. USPS Postage Increase**

23 PG&E forecasts a \$1.1 million increase in 2023 expense compared
24 to 2020 recorded costs due to increases in the cost of postage.¹² From
25 2017-2020, PG&E experienced a 1.19 percent average annual increase

⁹ 2019 Billing and Credit operations were impacted by emergency protections in place due to catastrophic wildfires per D.19-07-015 and R.18-03-011.

¹⁰ Exhibit (PG&E-6), WP 6-18, lines 1-4.

¹¹ Exhibit (PG&E-6), WP 6-9, line 14.

¹² Exhibit (PG&E-6), WP 6-12, line 4.

in the cost of postage from the USPS.¹³ This amount includes an additional \$0.4 million one-time increase for postage costs in 2023.¹⁴

d. Other

PG&E forecasts a \$1.6 million increase in 2023 expense compared to 2020 recorded costs due to increases in vendor related contract expenses throughout BRC and increases in payment channel programs.¹⁵

e. Paperless Adoption Savings

PG&E forecasts a \$3.9 million decrease in 2023 expense compared to 2020 recorded costs due to a forecasted 10 percent year-over-year increase in paperless bills.¹⁶ The increased adoption of paperless bills reduces PG&E's 2023 expense forecast compared to 2020 recorded costs because it forecasts a decrease in paper bills.¹⁷

f. Efficiencies

PG&E forecasts a \$1.4 million decrease in 2023 expense compared to 2020 recorded costs due to efficiencies throughout BRC, including one-time contract savings, reduced field costs due to AMI installations, and staffing reductions in various Billing Operations departments.¹⁸

C. Activities and Costs by MWC

PG&E tracks the costs of its BRC activities in five expense MWCs and one capital MWC which are discussed in further detail below. For a year-over-year overview of PG&E's BRC activities by MWC, please see WP 6-7.

1. MWC AR: Read and Investigate Meters

PG&E's 2023 forecast of \$0.2 million supports Complex Billing activities, such as retrieving interval electric and gas meter data for large commercial,

¹³ Exhibit (PG&E-6), WP 6-12, line 21.

¹⁴ Exhibit (PG&E-6), WP 6-12, line 2.

¹⁵ Exhibit (PG&E-6), WP 6-13, line 6.

¹⁶ Exhibit (PG&E-6), WP 6-15, line 9.

¹⁷ Exhibit (PG&E-6), WP 6-15, line 1.

¹⁸ Exhibit (PG&E-6), WP 6-11, line 9; and WP 6-16, lines 1-2 for labor rates.

1 industrial, and agricultural customers via telephony-based metering and field
2 retrieval of interval data.¹⁹

3 **2. MWC EZ: Manage Various Customer Care Processes**

4 PG&E's 2023 forecast of \$1.9 million supports usage analysis and
5 QA on meter data for load research, responding to a variety of customer
6 inquiries and requests for literature (e.g., CARE and Medical Baseline
7 applications, energy saving tips, and third-party notifications), and
8 inserting and mailing miscellaneous mail pieces to customers.²⁰

9 **3. MWC IS: Bill Customers**

10 PG&E's 2023 forecast of \$48.5 million supports Billing Operations
11 Exceptions, Business Delivery, Complex Billing, Billing System and
12 Analytics, Printing and Bill Presentment activities such as printing and
13 mailing bills and managing paperless billing, Revenue Statistics activities
14 such as remittance of taxes and fees to various government and regulatory
15 agencies as well as revenue reporting, and performing Broken Lock
16 transactions.²¹

17 **4. MWC IT: Manage Credit**

18 PG&E's 2023 forecast of \$14.6 million supports assessing the
19 creditworthiness of new and existing customers, securing accounts and
20 customer deposits as appropriate, managing accounts receivable for active
21 accounts, sending delinquency notices to customers, and performing in-field
22 service disconnections due to non-payment.²²

23 **5. MWC IU: Collect Revenue**

24 PG&E's 2023 forecast of \$8.7 million supports receiving and processing
25 payments received from electronic payment channels and via USPS,
26 resolving payment-related customer inquiries, managing customer refunds
27 which include escheatment, and reconciling daily cash receipts.²³

¹⁹ Exhibit (PG&E-6), WP 6-1, line 1; and WP 6-7, line 27.

²⁰ Exhibit (PG&E-6), WP 6-1, line 2; and WP 6-7, line 27.

²¹ Exhibit (PG&E-6), WP 6-1, line 3; and WP 6-7, line 27.

²² Exhibit (PG&E-6), WP 6-1, line 4; and WP 6-7, line 27.

²³ Exhibit (PG&E-6), WP 6-1, line 5; and WP 6-7, line 27.

6. MWC 21: Miscellaneous Capital

PG&E's 2021 forecast of \$4.0 million supports replacing equipment used to insert and mail customer bills and notices.²⁴

D. Estimating Method

PG&E developed its BRC expense forecast using recorded 2020 expenses as a base. These recorded adjusted expenses were adjusted for labor and non-labor escalation, consistent with escalation rates described in Exhibit (PG&E-8), Chapter 4 and Exhibit (PG&E-12) Chapter 3, respectively. Further adjustments were made to reflect changes in program activity, as described elsewhere in this chapter.

E. Compliance with Prior Commission Decisions

1. Senate Bill 598 (Disconnections)

The Commission directed PG&E in the 2020 General Rate Case (GRC) Decision to provide the following information pursuant to Senate Bill (SB) 598, which amended Section 718(b) of the California Public Utilities Code (Pub. Util. Code):²⁵

In its next GRC, Pacific Gas and Electric Company shall include testimony on the actual annual percentages of residential utility disconnections for nonpayment during this GRC cycle and an analysis of the impact rate increases have on disconnections during this GRC period.²⁶

Pursuant to Decision 20-06-003, which set an annual cap of four percent on the percentage of residential customer accounts that Pacific Gas and Electric Company can disconnect from utility service in 2020, 2021, and 2022, this decision shall apply the four percent cap as the metric for

²⁴ Exhibit (PG&E-6), WP 6-3, line 2, and WP 6-19 to 6-20.

²⁵ The Governor approved Sen. Bill No. 598 (2017-2018 Reg. Sess.) in September 2017. SB 598 amended Section 718(b) of the California Pub. Util. Code to require PG&E in each GRC to designate the impact of any proposed increase in rates on disconnections for nonpayment as an issue in the scope of the proceeding; and conduct an assessment of and properly identify the impact of any proposed increase in rates on disconnections for nonpayment, which shall be included in the record of the proceeding. SB 598 also directs the Commission to adopt residential utility disconnections for nonpayment as a metric and incorporate the metric into each gas and electrical corporation's GRC.

²⁶ D.20-12-005, p. 414, OP 16.

1 residential nonpayment disconnections as directed in Public Utilities
2 Code 718(b).²⁷

3 PG&E suspended disconnections for residential and small business
4 customers in March 2020 following the Governor's declaration of a state of
5 emergency in response to the COVID-19 pandemic.²⁸ In addition, the
6 Commission issued Res.M-4842 in April 2020, which directed PG&E to
7 extend the moratorium on disconnections through April 16, 2021.²⁹ The
8 Commission acknowledged in the 2020 GRC Decision that:

9 ...any meaningful analysis of disconnections can only be done on data
10 collected after the current moratorium cycle.³⁰

11 Following this decision, the Commission issued Res.M-4849 in
12 February 2021, which extended the moratorium on disconnections through
13 June 30, 2021 with an option to extend that date.³¹

14 As a result of the disconnection moratorium, PG&E's only residential
15 disconnections during the 2020 GRC period (2020-2022) occurred during
16 the brief period prior to its suspending disconnections (i.e., January through
17 mid-March 2020). During this period, PG&E disconnected
18 43,699 customers (23,006 in January, 20,693 in February, and 6,955 in
19 March). PG&E did not implement any rate changes during this period and
20 thus cannot conduct an analysis to determine if there is a correlation
21 between disconnections and rate increases during that brief period.

22 The Commission clarified in D.20-06-003, OP 1 that the disconnection
23 caps shall become effective after the current moratorium on disconnections
24 is lifted.³² Following the resumption of disconnections, PG&E will include
25 information on residential disconnections in the monthly reports filed with the
26 Commission in R.18-07-005.³³ PG&E will monitor its residential

²⁷ D.20-12-005, p. 414, OP 17.

²⁸ See PG&E Advice Letter 4227-G/5784-E and supplements.

²⁹ Res. M-4842 (Issued April 17, 2020), p. 12, OP 5.

³⁰ D.20-12-005, p. 191.

³¹ Res. M-4849 (Issued February 12, 2021), p. 33, OP 1.

³² D.20-06-003, pp. 144-145, OP 1 states, "these measures shall become effective upon after [sic] the current moratorium on disconnections is lifted."

³³ D.18-12-013, p. 32, OP 6.

disconnections to ensure they do not exceed the caps³⁴ which are identified below in Table 6-2.

TABLE 6-2
BILLING, REVENUE, AND CREDIT
ANNUAL RESIDENTIAL DISCONNECTION CAPS

Line No.	Target Date	Residential Disconnection Cap
1	July 1, 2020	4%
2	January 1, 2021	4%
3	January 1, 2022	4%
4	January 1, 2023	3.5%
5	January 1, 2024	3.5%

2. Billing Compliance Report

The Commission directed PG&E in Decision (D.) 07-09-041 to report the following in future GRCs:

- a) The number and amount of delayed bills and estimated bills, over time, that are uncollectible pursuant to Rule 17.1 time limits;³⁵ and
- b) Performance with respect to minimizing uncollectible amounts due to Rule 17.1 time limits.³⁶

TABLE 6-3
NUMBER OF AND RECORDED REVENUES RELATED TO LATE AND NON-COMPLIANT
ESTIMATED BILLS
(THOUSANDS OF NOMINAL DOLLARS)

Line No.	Description	2018	2019	2020
1	Late Bills	4,989	7,723	13,265
2	Late Bill Uncollectible Revenue	\$3,039	\$5,423	\$6,233
3	Estimated Bills	4,616	4,175	599
4	Estimated Bill Uncollectible Revenue	\$425	\$192	\$82

The recent increase in Gas AMI Module failures (see Exhibit (PG&E-6), Chapter 9) has had a direct impact on this growth in uncollectible revenue.

³⁴ D.20-06-003, p. 145, OP 1a.

³⁵ D.07-09-041, p. 50.

³⁶ D.07-09-041, p. 64, OP 11.

1 Although estimated bills/reads are calculated based on the parameters
2 within Rule 9, once a module is remediated, PG&E performs analysis to
3 determine if bill corrections are required, and if so, identifies uncollectible
4 revenues associated with the corrected bills, as defined in Rule 17.1

5 **F. Cost Tables**

6 PG&E summarizes its BRC recorded and forecasted expenditures in the
7 following tables:

- 8 • Table 6-4 shows 2016 through 2020 recorded adjusted expenses and 2021
9 through 2023 forecast expenses by MWC; and
- 10 • Table 6-5 shows 2016 through 2020 recorded adjusted capital expenditures
11 and 2021 through 2026 forecast capital expenditures by MWC.

TABLE 6-4
BILLING, REVENUE, AND CREDIT
EXPENSE BY MWC
(THOUSAND OF NOMINAL DOLLARS)

Line No.	MWC	Description	Recorded Adjusted				Forecast			Workpaper Reference	
			2016	2017	2018	2019	2020	2021	2022		2023
1	AR	Read & Investigate Meters	\$1,037	\$680	\$(588)	\$(1,815)	\$(362)	\$(482)	\$(364)	\$(241)	WP 6-1, line 1
2	EZ	Manage Var Cust Care Processes	3,402	2,008	2,883	1,713	2,344	1,742	1,796	1,852	WP 6-1, line 2
3	IS	Bill Customers	59,076	54,521	49,981	44,296	47,357	46,517	46,673	48,517	WP 6-1, line 3
4	IT	Manage Credit	14,920	16,196	14,683	12,881	8,255	12,856	14,243	14,648	WP 6-1, line 4
5	IU	Collect Revenue	7,191	8,181	7,953	6,887	6,890	8,025	8,443	8,740	WP 6-1, line 5
6		Total	\$85,625	\$81,586	\$74,912	\$63,963	\$64,484	\$68,658	\$70,792	\$73,516	WP 6-1, line 6

TABLE 6-5
BILLING, REVENUE, AND CREDIT
CAPITAL BY MWC
(THOUSAND OF NOMINAL DOLLARS)

Line No.	MWC	Description	Recorded Adjusted					Forecast				Workpaper Reference	
			2016	2017	2018	2019	2020	2021	2022	2023	2024		2025
1	21	Misc. Capital	-	\$5,056	\$765	\$177	\$1,146	\$4,000	-	-	-	-	WP 6-3, line 1
2		Total	-	\$5,056	\$765	\$177	\$1,146	\$4,000	-	-	-	-	WP 6-3, line 2

(PG&E-6)

**PACIFIC GAS AND ELECTRIC COMPANY
2023 GENERAL RATE CASE**

Testimony X Workpapers SOQ

Exhibit Number: 6 Chapter Number: 6

Chapter Title: Billing, Revenue, and Credit

Witness Name: Lorenzo Hagos

Page No.	Line No.	Item	As Filed	As Corrected
Errata as of November 5, 2021				
6-12	NA	Footnote 24	²⁴ Exhibit (PG&E-6), WP 6-3, line 2.	²⁴ Exhibit (PG&E-6), WP 6-3, line 2, and WP 6-19 to 6-20.

PACIFIC GAS AND ELECTRIC COMPANY
CHAPTER 7
METERING SERVICES AND ENGINEERING

PACIFIC GAS AND ELECTRIC COMPANY
CHAPTER 7
METERING SERVICES AND ENGINEERING

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PACIFIC GAS AND ELECTRIC COMPANY
CHAPTER 7
METERING SERVICES AND ENGINEERING

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PACIFIC GAS AND ELECTRIC COMPANY
CHAPTER 7
METERING SERVICES AND ENGINEERING

A. Introduction

1. Scope and Purpose

This chapter demonstrates that Pacific Gas and Electric Company's (PG&E or the Company) expense and capital forecasts for its Metering Services and Engineering (MS&E) programs are reasonable and should be approved.

Adoption of MS&E's forecasts will ensure PG&E's ability to deliver and continually improve upon its metering products and services, which are foundational to a quality customer experience through the timely recording, collection, and delivery of accurate usage and billing data.

In PG&E's 2017 and 2020 General Rate Case (GRC) applications, all PG&E's Metering costs were summarized together in one chapter. This included both Field Metering and MS&E. Since Field Metering transferred from Customer Care to Electric Operations and Gas Operations in 2018, the associated costs between these two organizations have been separated and are forecasted in their corresponding exhibits.¹

Additionally, PG&E established a Project Management Office (PMO) to focus on developing and implementing its Advanced Meter Infrastructure (AMI) Gas Module replacement plan. The programmatic management, project plan, and capital costs associated with the Gas AMI Module replacements will be tracked and reported by the AMI PMO which is now included in Exhibit (PG&E-6), Chapter 9. This chapter assumes a decrease in gas module inventory purchases needed to support only a minimum level of corrective maintenance.²

¹ See Exhibit (PG&E-3), Ch. 8 for more information on Field Metering.

² The Gas AMI Module Replacement project has accounted for all inventory supply.

2. Summary of Request

a. Expense

PG&E requests that the California Public Utilities Commission (CPUC or Commission) adopt its 2023 expense forecast of \$8.0 million for MS&E. This is \$1.0 million lower than 2020 recorded costs of \$9.0 million.³ This decrease is primarily attributable to continuous improvement efforts associated with re-evaluating current meter maintenance policies and realigning these activities based on safety and performance risks.

b. Capital

PG&E requests that the Commission adopt the following capital forecasts for its MS&E activities: \$111.7 million for 2021, \$108.5 million for 2022, \$107.3 million for 2023, \$111.4 million for 2024, \$116 million for 2025, and \$118.9 million for 2026. The 2023 forecast is \$9 million less than the 2020 recorded amount of \$116.3 million.⁴ This variation in metering capital expenditures is mainly driven by a transition of gas module inventory purchases from corrective maintenance to the Company's Gas AMI Module Replacement project.

3. Overview of Recorded and Forecasted Costs

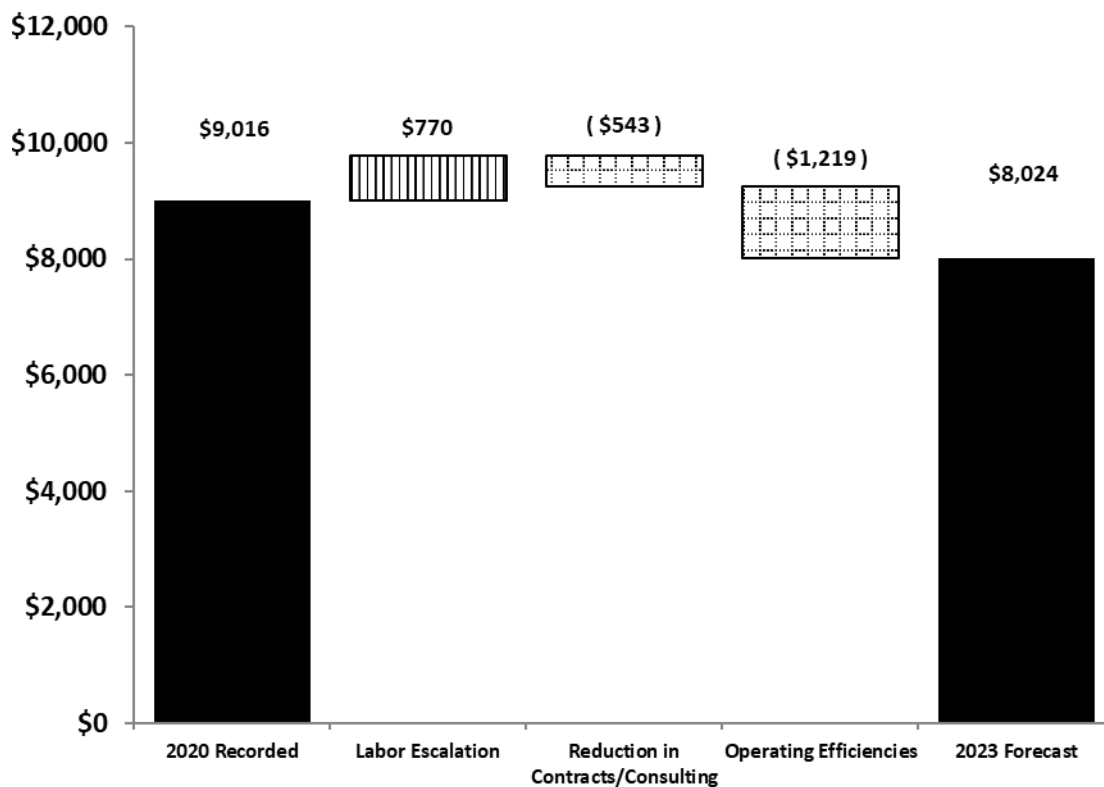
a. Expense

Figure 7-1 below shows the projected change in PG&E's MS&E expenses between 2020 recorded costs and the 2023 forecast. PG&E describes the core MS&E activities associated with its 2023 expense forecast in Section B.1 and the main drivers of change associated with the 2023 expense forecast in Section B.3. Section C.2 includes a description of the expense Major Work Categories (MWCs) that PG&E uses to track costs associated with its MS&E activities.

³ See Exhibit (PG&E-6), WP 7-9, lines 1 and 27 for Year-Over-Year (YOY) Expense Forecast Walk.

⁴ See Exhibit (PG&E-6), WP 7-10, lines 1, 10, 19, 27, 34, 41, and 48 for YOY Capital Forecast Walk.

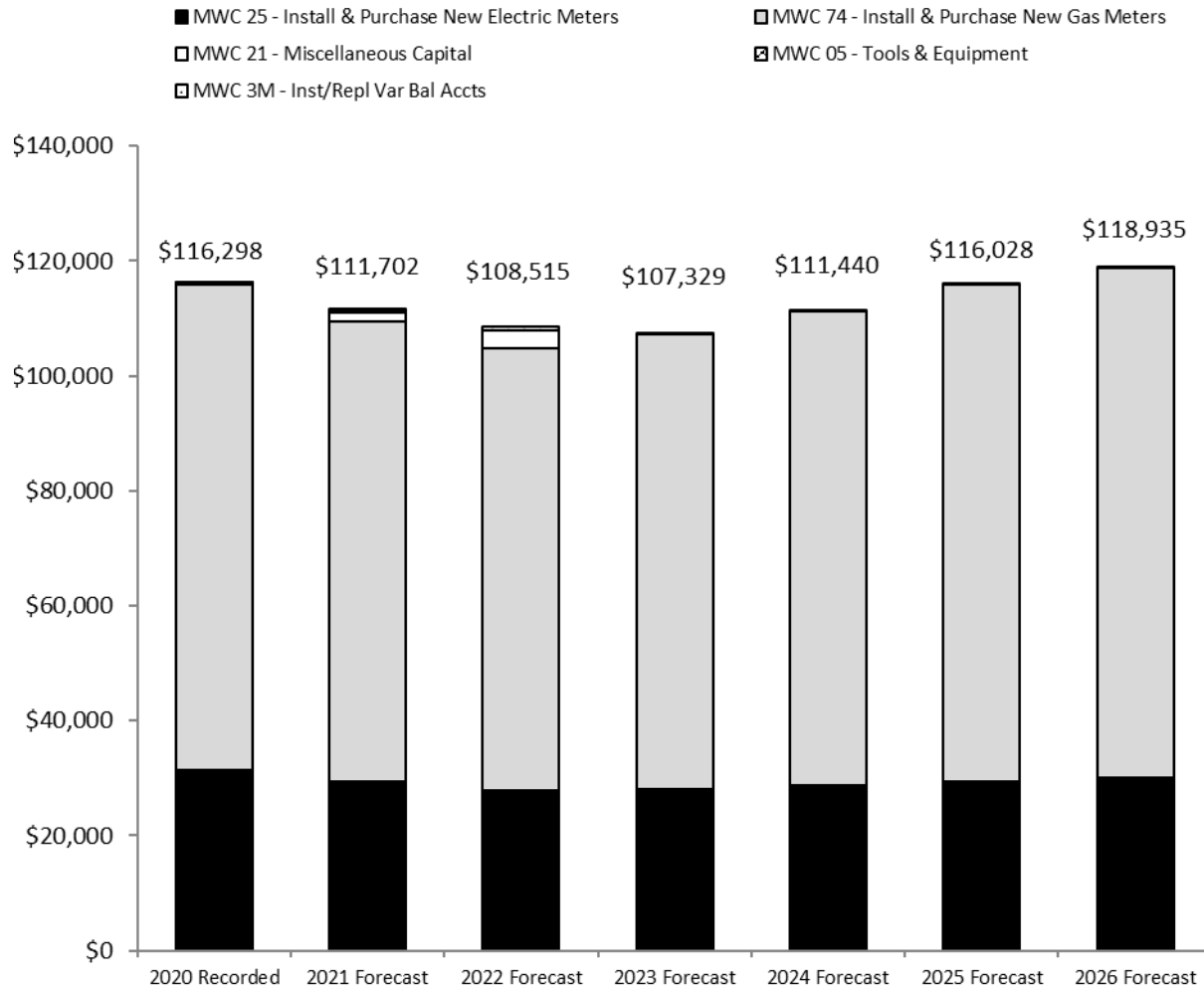
**FIGURE 7-1
EXPENSE WALK (2020-2023)
(THOUSANDS OF NOMINAL DOLLARS)**



b. Capital

Figure 7-2 below shows PG&E's recorded capital expenditures for 2020 and forecast capital expenditures for 2021 through 2026 by MWC. PG&E's describes the core MS&E activities associated with its 2023 capital forecast in Section B.1. and the main drivers of change associated with the 2023 capital forecast in Section B.3. Section C.2 includes a description of the capital MWCs that PG&E uses to track costs associated with its MS&E activities.

FIGURE 7-2
CAPITAL EXPENDITURES BY MWC BY YEAR (2020-2026)
(THOUSANDS OF NOMINAL DOLLARS)



4. Support for Request

PG&E's expense and capital expenditure forecasts are reasonable because they:

- Enable PG&E to provide safe, reliable, accurate, and affordable meter operations and services;
- Support the meter maintenance and network optimization necessary to supply timely and accurate recording, collection, and delivery of customer billing data;
- Provide necessary meter acceptance testing, vendor Quality Assurance (QA), meter warranty management, and engineering analysis; and

- Maintain a long-term meter technology strategy and roadmap to continually develop, evaluate, and adopt new metering technologies and functionality, enabling PG&E to better serve its customers.

5. Organization of the Remainder of This Chapter

The remainder of this chapter is organized as follows:

- Section B – Program Overview;
- Section C – Activities and Costs by MWC;
- Section D – Estimating Method;
- Section E – Compliance with Prior Commission Decisions; and
- Section F – Cost Tables.

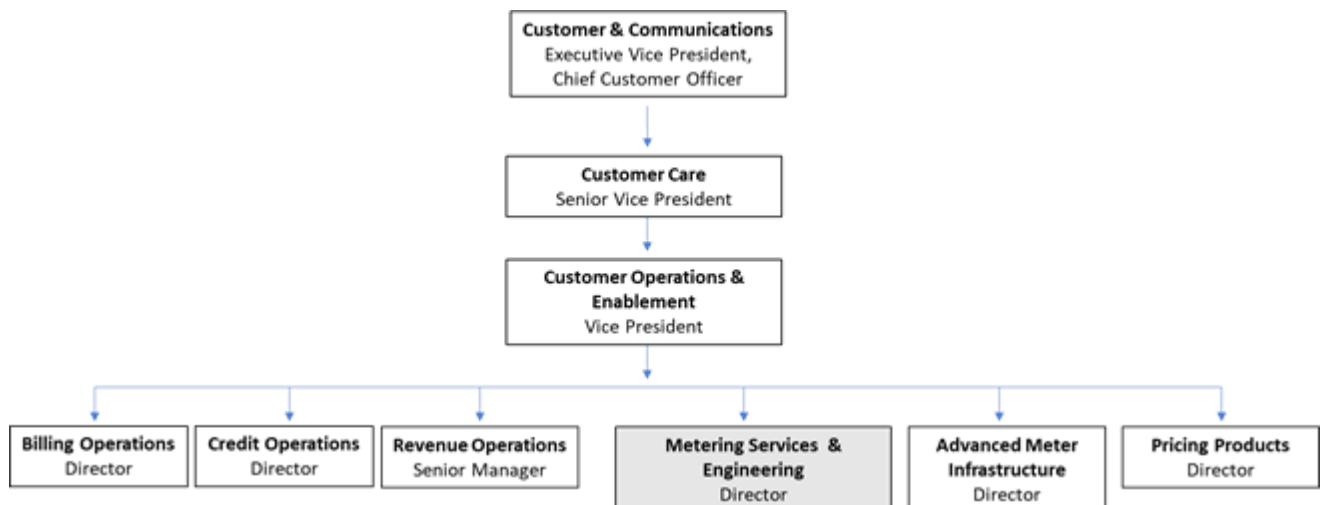
B. Program Overview

1. Management Structure

PG&E re-structured its Customer Care organization in March 2020 to better align customer service and support resources. With this change, PG&E established a Customer Operations and Enablement team that is responsible for meter testing, customer billing, payment processing, credit and collection policy, pricing strategy, and implementation and operations.

The Director for Meter Service & Engineering manages MS&E activities within the Customer Operations and Enablement team, as shown in the shaded area below in Figure 7-3.

**FIGURE 7-3
MS&E ORGANIZATIONAL STRUCTURE**



2. Program Description

MS&E oversees PG&E's meter maintenance programs and is responsible for executing a long-term, sustainable meter asset strategy and roadmap. MS&E also supports the Company with meter and module purchases, meter vendor management, meter plant operations, meter engineering support, and meter data information management, reporting, and systems support.

a. Meter Asset Management

The Meter Asset Management team plans, budgets, and ensures the timely and accurate delivery of meter products. This process includes meter vendor relationship management, purchasing, receiving, quality acceptance testing, meter asset record updates, retirements, and warranty returns.

b. Electric Meter Engineering Programs and Technology

The Meter Engineering Programs and Technology team creates and maintains long-term meter engineering, technology, and network strategies. These strategies include developing standards, work procedures, and plans to manage technology obsolescence through emerging technology, testing, and certifying new metering products; and providing advanced engineering services (e.g., metering firmware and software management).

c. Gas Meter Engineering and Programs

The Gas Meter Engineering team manages strategies for gas meters and related equipment and assets. This includes developing standards and work procedures, managing technology obsolescence through emerging technologies, testing, and certifying new metering products, and providing subject matter expert support to other lines of business and field employees.

The Gas Meter Programs team maintains and validates gas meter reliability, accuracy, and overall performance through random and scheduled inspections, tests, and checks. In compliance with CPUC General Order 58-A, PG&E's Gas Meter Performance Control Program includes Scheduled Meter Changes (SMC) for the majority of diaphragm

1 meters and Periodic Meter Changes for small meter populations that
 2 cannot be managed effectively through statistical techniques. The SMC
 3 uses statistical sampling to monitor and, if necessary, schedule the
 4 replacement of certain groups of gas meters. This team also manages
 5 preventive and corrective maintenance on PG&E's gas metering assets.

6 **d. Gas and Electric Meter Services Facility**

7 The Gas and Electric Meter Services (GEMS) facility (or GEMS
 8 Meter Plant) is responsible for ensuring that quality metering products
 9 are received into inventory, testing gas meter accuracy, and properly
 10 disposing of metering assets after they are removed from service. The
 11 GEMS Meter Plant performs meter QA on gas and electric meters
 12 accuracy. It also manages the retirement and proper disposal of gas
 13 and electric meters, supports the inventory return process by sending
 14 eligible metering assets to the vendor for warranty return, and updates
 15 meter and module information in PG&E's Customer Care and Billing
 16 database.

17 **e. Meter Network Operations and New Products**

18 The Meter Network Optimization Team is responsible for the end-of
 19 life replacements and updates of various platforms, including
 20 transitioning from 3G to 5G networks and expanding the AMI network.

21 **f. Meter Engineering Technical Support and Training**

22 In partnership with Field Metering Operations and Gas Operations,
 23 MS&E develops standards, work procedures, and field job aids; delivers
 24 field training; formalizes communications; and verifies that metering
 25 operations are consistent with regulatory requirements. In partnership
 26 with the SmartMeterTM⁵ Operation Center, Meter Engineering Technical
 27 Support and Training uses AMI data real-time power outage monitoring
 28 and grid asset planning.

5 SmartMeter is a PG&E registered trademark. All further references to SmartMeters in PG&E's testimony in this proceeding should be assumed to refer to the trademarked name, without continually using the TM symbol, consistent with legally-acceptable practice.

3. 2023 Forecast

a. Expense Drivers

PG&E forecasts total MS&E expenses of \$8.0 million in 2023, which represents a \$1 million decrease compared to 2020 recorded costs of \$9 million. PG&E forecasts a \$1 million decrease due to operational efficiencies and a reduction in contract and consulting costs, which are partially offset by labor escalation. PG&E discusses these drivers in further detail below.

1) Operational Efficiencies

Compared to 2020 recorded, PG&E forecasts an additional decrease of \$1.2M in the balance of its 2023 metering expenditures for operational efficiencies achieved from leveraging improved meter technologies and adjusting maintenance practices by analyzing PG&E's historical rotary meter accuracy. For example, as of January 1, 2021, PG&E has transitioned the rotary meter differential test from a 5-year maintenance schedule to a 10-year maintenance schedule for about 20,000 of approximately 27,700 of our rotary meter population. The remaining rotary meters will either remain on a 5-year maintenance schedule or are already part of a more frequent maintenance schedule. The net savings annually is approximately \$456 thousand in expense starting in 2021.⁶

2) Contract/Consulting Reduction

PG&E forecasts total expense costs of \$0.4 million in 2023, which represent a \$0.5 million decrease compared to 2020 recorded costs of \$0.9 million. This decrease is primarily driven by a reduction in SmartMeter opt-out and consulting services.⁷

3) Labor Escalation

PG&E forecasts \$0.7 million in metering labor escalation costs for 2023 relative to 2020 recorded expense costs of \$9 million.⁸

⁶ See Exhibit (PG&E-6), WP 7-13 for Gas Meter Maintenance Efficiency.

⁷ See Exhibit (PG&E-6), WP 7-9, lines 1, 10, 26, and 27 for YOY Expense Forecast Walk.

⁸ See Exhibit (PG&E-6), WP 7-9, lines 4, 14, and 22 for YOY Expense Forecast Walk.

Labor escalation rates used in this chapter are described in Exhibit (PG&E-8), Chapter 4.

b. Capital Drivers

PG&E forecasts total capital expenditures of \$107.3 million in 2023, which represent a \$9 million decrease compared to 2020 recorded costs of \$116.3 million. As discussed earlier in the Chapter, this variance in spending assumes a reduction of Gas Module inventory purchases funded by this chapter to support only a minimal level of Module corrective maintenance while the Gas AMI Module Replacement project accounts and plans for all Module replacement costs going forward.⁹

1) Escalation

PG&E forecasts \$6.6 million in labor and non-labor escalation costs for 2023 relative to the 2020 recorded capital costs of \$116.3 million.¹⁰ PG&E used the annual labor and non-labor escalation factors described in Exhibit (PG&E-8), Chapter 4, and Exhibit (PG&E-12), Chapter 3 respectively.

2) Gas Meter Exchanges and Inventory Purchases (MWC 74)

PG&E forecasts a total of \$102.3 million for gas metering maintenance exchanges and inventory to support maintenance activities for the 2021-2026 period.¹¹ This includes \$18.9 million in 2021, \$17.7 million in 2022, \$17.8 million in 2023, \$15.4 million in 2024, \$15.9 million in 2025, and \$16.4 million in 2026. The 2023 capital forecast is a \$8.7 million decrease over 2020 expenditures. As previously discussed, this variance is from a decrease in Gas Module inventory purchases to support a minimum level of corrective maintenance while the Gas AMI Module project accounts and plans for all Module replacement costs going forward.

⁹ The Gas AMI Module Replacement project has accounted for all inventory supply.

¹⁰ See Exhibit (PG&E-6), WP 7-10, lines 2, 11, and 20 for YOY Capital Forecast Walk.

¹¹ See Exhibit (PG&E-6), WP 7-14, line 14 for Capital Forecast Summary.

3) Completed Projects (MWC 25 and 74)

PG&E forecasts a reduction of approximately \$0.8 million in 2023 compared to 2020 expenditures due to the completion of projects authorized in the 2020 GRC, including the Meter Network Optimization, 3G to 4G Upgrade, and Radio Frequency Identification Projects.¹²

C. Activities and Costs by MWC

The activities described in this chapter have been categorized into three expense MWCs¹³ and five capital MWCs,¹⁴ as discussed in further detail below.

1. Expense

a. MWC EY (Perform Electric Meter Maintenance)

PG&E's 2023 forecast of \$0.9 million includes meter activities associated with MWC EY such as meter programming, meter network maintenance, and electric meter accuracy.

b. MWC EZ (Manage Various Customer Care Processes)

PG&E's 2023 forecast of \$0.4 million includes meter activities associated with MWC EZ, primarily associated with SmartMeter Opt-Out Program oversight and supplemental utility meter engineering support.

c. MWC HY (Perform Gas Meter Maintenance)

PG&E's 2023 forecast of \$6.7 million includes meter activities associated with MWC HY such as: gas meter preventive maintenance, gas meter corrective maintenance, and the associated staff support necessary to effectively perform these activities.

¹² See Exhibit (PG&E-6), WP 7-10, lines 5-7, 14-16, 23.

¹³ See Exhibit (PG&E-6), WP 7-9, for YOY Expense Walk for additional details on the expense forecast by MWC.

¹⁴ See Exhibit (PG&E-6), WP 7-10 and 7-14 for YOY Capital Walk and Capital Forecast Summary for additional details on the capital forecast by MWC.

2. Capital

a. MWC 05 (Tools and Equipment)

PG&E's 2023 forecast of \$0.1 million for metering costs associated with MWC 05 includes tools and equipment necessary to perform all field metering troubleshooting, meter maintenance, meter repair, meter QA testing, and meter testing activities.

b. MWC 21 (Miscellaneous Capital)

The metering costs associated with MWC 21 support the Meter Radio Frequency Identification project, which the Commission authorized in the 2020 GRC. PG&E is not requesting funding for this work in the 2023 GRC.

c. MWC 25 (Electric Metering Capital)

PG&E's 2023 forecast of \$28 million for costs associated with MWC 25 includes new electric meter purchases for new customer growth, replacement of failed units, and retirements.

d. MWC 74 (Gas Metering Capital)

PG&E's 2023 forecast of \$79.2 million for costs associated with MWC 74 includes new fully integrated gas meter purchases and the associated labor necessary to perform gas meter installations, exchanges, removals, and retirements for gas meter preventative, corrective maintenance, and new business. This chapter excludes inventory and labor costs associated with gas meter replacements that are driven by a Gas Module failure now residing in the Gas AMI Module Replacement Project.¹⁵

e. MWC 3M (Balancing Account Capital)

The metering costs associated with MWC 3M in 2021 and 2022 support the Butte Wildfire Rebuild effort. Starting in 2023, PG&E is transitioning the forecast for these costs to MWCs 25 and 74.

¹⁵ See PG&E Exhibit (PG&E-6), Ch. 9, Gas AMI Module Replacement Project.

1 **D. Estimating Method**

2 PG&E's 2023 MS&E expense forecast was developed using recorded 2020
3 expenses as a base. These recorded adjusted expenses were adjusted for
4 labor and non-labor escalation, consistent with escalation rates described in
5 Exhibit (PG&E-8), Chapter 4 and Exhibit (PG&E-12) Chapter 3, respectively.
6 Further adjustments were made to reflect changes in program activity, as
7 described elsewhere in this chapter.

8 PG&E used two main methods to estimate the MS&E capital expenditures
9 required for its metering programs. The first method includes: (1) deriving unit
10 costs by dividing 2020 recorded capital expenditures by 2020 recorded units;
11 and (2) multiplying the forecast of units by the expected unit cost, adding
12 escalation where appropriate. The second method includes labor or non-labor
13 efficiency assumptions where appropriate. Forecasted maintenance unit
14 volumes are mainly based on 2020 unit volumes.

15 **E. Compliance with Prior Commission Decisions**

16 **1. SmartMeter Opt-Out**

17 The SmartMeter Opt-Out Phase 2 Decision¹⁶ requires PG&E to
18 (1) provide a summary of costs incurred and revenues collected associated
19 with providing the Opt-Out service option; and (2) identify the portion of
20 revenue that was over or under collected for a subsequent allocation or
21 refunds that will be made to the residential customer class. PG&E closed its
22 SmartMeter Opt-Out balancing accounts in 2017, as instructed by the
23 Commission in the SmartMeter Opt-Out Phase 2 Decision.¹⁷

24 Table 7-1 and 7-2 below provides a summary of recorded Opt-Out costs
25 and billed revenues associated with the SmartMeter Opt-Out Program. At
26 this time, PG&E proposes no adjustments to the SmartMeter Opt-Out initial
27 enrollment charge or the monthly fees to account for the under-collection.

¹⁶ CPUC D.14-12-078, p. 79, Ordering Paragraph (OP) 6.

¹⁷ CPUC D.17-05-013, pp. 119-120.

2. SmartMeter Cost Effectiveness Update

Decision (D.) 17-05-013 ordered PG&E to prepare a complete update of the costs and benefits in Tables 3 and 4 from D.09-03-026, relating to the SmartMeter Upgrade Program (Application 07-12-009).

Pacific Gas and Electric Company (PG&E) shall submit an updated version of its 'SmartMeter Cost Effectiveness Update' as a stand-alone exhibit in each General Rate Case Phase 1 application that it files after the effective date of this decision. In doing so, PG&E shall not alter the format or the level of detail used in Exhibit PG&E-47 in the instant proceeding, unless it is to add detail.¹⁸

PG&E provides the stand-alone SmartMeter Cost Effectiveness Update exhibit in Attachment A of this chapter.

¹⁸ D.19-10-038, p. 16, OP 1.

TABLE 7-1
SMARTMETER OPT-OUT COSTS
(THOUSANDS OF NOMINAL DOLLARS)

Line No.

Cost Type	Description	2020 Actuals	2021	2022	2023
Expense	Opt Out Meter Reading	\$3,659	\$3,803	\$3,951	\$4,066
	SOP: TOU Meter Maint/Programming	\$215	\$221	\$228	\$234
	SOP: Project Management Office	\$0	\$0	\$0	\$0
Expense Total		\$3,874	\$4,024	\$4,179	\$4,301

6

Description	2020 Actuals	2021	2022	2023
Average Opt Out Customers Reads Per Month	34	34	34	34

7

8

Cost Type	Description	2020 Actuals	2021	2022	2023	2024	2025	2026
Capital	SOP: Electric Meter Purchases	\$0	\$0	\$0	\$0	\$375	\$386	\$398
	SOP: NEMS (flat)	\$98	\$101	\$103	\$106	\$109	\$112	\$115
	SOP: Electric Meter Exchange (flat)	\$307	\$316	\$325	\$334	\$342	\$351	\$360
	SOP: Gas Module Removal (flat)	\$102	\$105	\$108	\$112	\$114	\$117	\$120
	SOP: Gas Meter Exchange	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Capital Total		\$507	\$521	\$537	\$552	\$941	\$966	\$992

TABLE 7-2
SMARTMETER BILLED REVENUE COSTS
(THOUSANDS OF NOMINAL DOLLARS)

Line No.

Billed and Collected Revenues	2018 Billed Revenue	2019 Billed Revenue	2020 Billed Revenue	2021 Revenue Forecast	2022 Revenue Forecast	2023 Revenue Forecast
1						
2	Non CARE Customers - Initial One Time Charge	\$ 189	\$ 157	\$ 73	\$ 73	\$ 73
3	CARE Customers - Initial One Time Charge	\$ 7	\$ 7	\$ 3	\$ 3	\$ 3
4	Non CARE Customers - Monthly Fees	\$ 797	\$ 620	\$ 557	\$ 598	\$ 574
5	CARE Customers - Monthly Fees	\$ 109	\$ 7	\$ 95	\$ 127	\$ 123
6	Total Billed & Forecasted Revenues	\$ 1,102	\$ 791	\$ 728	\$ 800	\$ 773

1 **F. Cost Tables**

2 PG&E's forecast for MS&E is summarized in the following tables:

- 3 • Table 7-3 shows 2016 through 2020 recorded adjusted expenses and 2021
4 through 2023 forecast expenses by MWC; and
- 5 • Table 7-4 shows 2016 through 2020 recorded adjusted capital expenditures
6 and 2021 through 2026 forecast capital expenditures by MWC.

TABLE 7-3
EXPENSES BY MWC
(THOUSANDS OF NOMINAL DOLLARS)

Line No.	MWC	Description	2016 Recorded Adjusted	2017 Recorded Adjusted	2018 Recorded Adjusted	2019 Recorded Adjusted	2020 Recorded Adjusted	2021 Forecast	2022 Forecast	2023 Forecast
1	EY	Change/Maint Used Elec Meter	1,492	954	892	773	796	776	801	892
2	EZ	Manage Var Cust Care Processes	61	445	226	133	965	125	129	459
3	HY	Change/Maint Used Gas Meters	8,063	5,768	6,422	7,172	7,255	7,027	5,473	6,673
4	Total		9,616	7,166	7,541	8,079	9,016	7,928	6,404	8,024

TABLE 7-4
CAPITAL EXPENDITURES BY MWC
(THOUSANDS OF NOMINAL DOLLARS)

			Capital Expenditures										
No.	MWC	Description	2016 Recorded	2017 Recorded	2018 Recorded	2019 Recorded	2020 Recorded	2021 Forecast	2022 Forecast	2023 Forecast	2024 Forecast	2025 Forecast	2026 Forecast
1	05	Tools & Equipment	121	231	24	3	106	100	100	100	100	100	100
2	21	Misc. Capital	85	10	2		151	1,731	3,082				
3	25	Install New Electric Meters	33,032	30,366	29,242	40,355	31,325	29,462	27,926	28,056	28,805	29,340	29,976
4	74	Install New Gas Meters	75,360	66,682	65,934	64,140	84,644	79,907	76,892	79,172	82,536	86,588	88,859
5	3M	Inst/Repl Var Bal Accts				74	73	502	515				
6	3J	SmartMeter Opt-Out	424	0									
7		Total	109,021	97,288	95,201	104,572	116,298	111,702	108,515	107,329	111,440	116,028	118,935

PACIFIC GAS AND ELECTRIC COMPANY
CHAPTER 7
ATTACHMENT A
SMARTMETER™ COST EFFECTIVENESS UPDATE

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PACIFIC GAS AND ELECTRIC COMPANY
CHAPTER 7
ATTACHMENT A
SMARTMETER™ COST EFFECTIVENESS UPDATE

A. Introduction

In the 2017 Pacific Gas and Electric Company (PG&E) General Rate Case (Application (A.)15-09-001, GRC), PG&E filed Exhibit (PG&E-47) in Compliance with Ordering Paragraph (OP) 20 of California Public Utilities Commission Decision (D.) 17-05-013. That decision ordered PG&E to prepare a complete update of the costs and benefits in Tables 3 and 4 from D.09-03-026, relating to the SmartMeter™¹ Upgrade (SMU) Program (A.07-12-009).

This testimony is prepared as directed in OP 1 of D.19-10-038 Regarding Compliance Matter in Phase 1 of the 2017 PG&E GRC. OP 1 states:

Pacific Gas and Electric Company (PG&E) shall submit an updated version of its 'SmartMeter Cost Effectiveness Update' as a stand-alone exhibit in each General Rate Case Phase 1 application that it files after the effective date of this decision. In doing so, PG&E shall not alter the format or the level of detail used in Exhibit PG&E-47 in the instant proceeding, unless it is to add detail.²

Section B of this report includes the updated analysis.

Section C provides an overview of other benefits that PG&E considers an important aspect of evaluating the value of SMU technology.

B. Updated Tables 3 and 4 From D.09-03-026

This section includes: (1) a summary of the results including key drivers of the updates compared to the original SMU analysis, as well as the updated amounts from the 2017 GRC Exhibit (PG&E-47) (the 2017 Update); (2) updated Tables 3 and 4 from D.09-03-026 comparing the original SMU Program Adopted values to the 2023 Update; (3) new Tables 3A and 4A, which compare the 2017

¹ SmartMeter is a PG&E registered trademark. All further references to SmartMeters in PG&E's testimony in this proceeding should be assumed to refer to the trademarked name, without continually using the ™ symbol, consistent with legally-acceptable practice.

² D.19-10-038, p. 16, OP 1.

Update to the 2023 Update; and (4) narrative explanations for each line item in the updated tables, describing the changes since the 2017 Update.

1. Summary of Costs and Benefits From Updated Tables 3 and 4

As described below, PG&E updated previous forecasts for the years 2017-2020 with actual data where applicable. PG&E also updated forecasts for SmartMeter meter deployment for new customer growth, usage of integrated Remote Connect and Disconnect (RCD) switches and the related benefits, and the implementation costs and program benefits of Time-of-Use (TOU) programs based on the latest available information. As shown in Table -1 below, Total Costs have increased slightly, and Total Benefits have decreased slightly from the 2017 Update:

**TABLE 7A-1
(TABLE 1)
SUMMARY COMPARISON
(THOUSANDS OF DOLLARS)**

Line No.	Description	Incremental Present Value of Revenue Requirement (PVRR)		
		Original SMU Decision	2017 Update	2023 Update
		D.09-03-026	2017 GRC, Exh-47	2023 GRC, Exh-7A
1	Total Costs (Table 3)	\$749,015	\$575,734	\$576,676
2	Total Benefits (Table 4)	(779,621)	(296,951)	(286,381)
3	Excess Costs/(Benefits)	\$(30,606)	\$278,783	\$290295

The PVRRs of Costs increased from \$575.7 million in the 2017 Update to \$576.7 million in the 2023 Update. As described below, this is driven by slightly higher implementation costs for the TOU program, offset by slightly lower costs resulting from the lower forecasted new customer growth rates.

The PVRR of Benefits decreased from (\$297.0 million) in the 2017 Update to (\$286.4million) in the 2023 Update. The decline is primarily related to reductions in the usage of RCD switches related to moratoriums associated with California wildfires and coronavirus (COVID-19), as well as public policy targets to reduce customer disconnections. In addition to the reduction related to RCD switches, there was a slight reduction in the value of energy conservation benefits associated with TOU programs based on

declines in the Power Price Forecast. These reductions were partially offset by an increase in the benefit associated with shortened tax depreciation lives discussed below.

2. Updated Tables 3 and 4 From D.09-03-026

Table 7A-2 (updated Table 3) and Table 7A-3 (updated Table 4) below provide: (1) cost or benefit information from D.09-03-026, which PG&E has converted to a PVRR;³ (2) updated cost or benefit information, which PG&E has also converted to PVRR; and (3) a “Status” column, which identifies whether the 2023 Update line item was revised, remains unchanged, or represents an added item compared to the original line items adopted in D.09-03-026.

³ Table 7A-2 includes two columns. The “Nominal” column represents the incremental costs of the SMU to be funded by the SmartMeter project (Project Costs). The “PVRR” column represents the Present Value of the Revenue Requirements associated with those nominal Project Costs, as well as the PVRR associated with the forecast ongoing costs of operating and maintaining the program over its useful life.

In Table 7A-3, the “Annualized” column represents the estimated annual amount of operational benefits at the completion of the project, in 2008 dollars. The PVRR column represents the PVRRs for all benefit streams over the 20-year life of the program.

TABLE 7A-2
(TABLE 3 FROM D.09-03-026)
ADOPTED AND UPDATED ESTIMATES OF ALLOCATED INCREMENTAL COSTS
(THOUSANDS OF DOLLARS)

Line No.		Incremental Costs				Status Compared to Original SMU Dec.
		From SMU Decision p. 151 of D.09-03-026		2023 Update See WP 7A-1 to 7A-2		
		Nominal	PVRR	Nominal	PVRR	
1	<u>Deployment Costs</u>					
2	Meter Devices (Less Home Area Network (HAN) and Electromechanical Meter Upgrades)	\$310,757	\$486,358	\$325,116	\$405,907	Revised
3	HAN Retrofit	26,532	24,581	21,846	24,947	Revised
4	Electromechanical Meter Retrofit	18,800	20,372	22,485	25,677	Revised
5	Information Technology (IT)	33,600	49,793	22,583	26,610	Revised
6	Title 24 Program Costs	–	26,174	–	–	Revised
7	Peak-Time Rebate Program Costs	–	27,592	–	–	Revised
8	TOU Program Costs	n/a	n/a	–	65,721	Added
9	Project Management	–	–	–	–	Unchanged
10	Training	1,697	1,592	1,697	1,592	Unchanged
11	Risk Based Allowance	44,139	46,724	–	–	Revised
12	Subtotal	\$435,525	\$683,186	\$393,728	\$550,453	–
13	<u>Operations and Maintenance Costs</u>					
14	Operations and Maintenance	\$4,993	\$42,886	\$5,978	\$15,419	Revised
15	Risk Based Allowance	562	503	–	–	Revised
16	Subtotal	\$5,555	\$43,389	\$5,978	\$15,419	–
17	<u>Other Costs</u>					
18	Technology Assessment	\$21,400	\$18,995	\$11,344	\$10,803	Revised
19	Risk Based Allowance	4,280	3,445	–	–	Revised
20	Subtotal	\$25,680	\$22,440	\$11,344	\$10,803	–
21	Total Incremental Costs	\$466,760	\$749,015	\$411,050	\$576,676	–

TABLE 7A-3
(TABLE 4 FROM D.09-03-026)
ADOPTED AND UPDATED ESTIMATES OF ALLOCATED INCREMENTAL BENEFITS
(THOUSANDS OF DOLLARS)

Line No.		Incremental Benefits				Status Compared to Original SMU Dec.
		From SMU Decision p. 152 of D.09-03-026		2023 Update		
		Annualized	PVRR	Annualized	PVRR	
1	<u>Operational Benefits</u>					
2	Integrated Connect/Disconnect Switches					
3	Avoided Field Visits	\$(6,682)	\$(114,702)	\$(6,019)	\$(63,968)	Revised
4	Improved Cash Flow	(969)	(11,174)	(365)	(1,943)	Revised
5	Reduced Bad Debt	(2,429)	(26,756)	(647)	(3,211)	Revised
6	Tax Benefit from Meter Replacement	n/a	(11,799)	n/a	(11,398)	Revised
7	Projected Additional Tax Benefits	n/a	n/a	n/a	(22,623)	Added
8	Subtotal	\$(10,080)	\$(164,431)	\$(7,032)	\$(103,144)	–
9	<u>Energy Conservation/Demand Response Benefits</u>					
10	Electric Conservation	n/a	\$(268,847)	n/a	–	Revised
11	Gas Conservation	n/a	–	n/a	–	Unchanged
12	Peak-Time Rebate	n/a	(262,916)	n/a	–	Revised
13	TOU	n/a	–	n/a	\$(183,238)	Added
14	Air Conditioning (A/C) Cycling	n/a	(83,427)	n/a	–	Revised
15	Subtotal	n/a	\$(615,190)	n/a	\$(183,238)	–
16	Total Incremental Benefits	n/a	\$(779,621)	n/a	\$(286,381)	–

3. New Tables 3A and 4A With Comparison to 2017 Update

Table 7A-4 (New Table 3A) and Table 7A-5 (New Table 4A) below provide the same information as Table 7A-2 (Table 3) and Table 7A-3 (Table 4), but instead of comparing the 2023 Update to the Original SMU Decision, these tables compare the 2023 Update to the 2017 Update. These tables also include the references to Section B4, as the changes in the 2023 Update will be described in relation to the 2017 Update.

**TABLE 7A-4
(TABLE 3A)
UPDATED ESTIMATES OF ALLOCATED INCREMENTAL COSTS
(THOUSANDS OF DOLLARS)**

Line No.		Incremental Costs				Status Compared to 2017 Update	Section B4 Reference
		2017 Update 2017 GRC, Exh-47		2023 Update See WP 7A-1 to 7A-2			
		Nominal	PVRR	Nominal	PVRR		
1	<u>Deployment Costs</u>						
2	Meter Devices (Less HAN and Electromechanical Meter Upgrades)	\$325,116	\$406,858	\$325,116	\$405,907	Revised	[B]
3	HAN Retrofit	21,846	24,947	21,846	24,947	Unchanged	[A]
4	Electromechanical Meter Retrofit	22,485	25,677	22,485	25,677	Unchanged	[A]
5	IT	22,583	26,610	22,583	26,610	Unchanged	[A]
6	Title 24 Program Costs	—	—	—	—	Unchanged	[A]
7	Peak-Time Rebate Program Costs	—	—	—	—	Unchanged	[A]
8	TOU Program Costs	—	63,814	—	65,721	Revised	[C]
9	Project Management	—	—	—	—	Unchanged	[A]
10	Training	1,697	1,592	1,697	1,592	Unchanged	[A]
11	Risk Based Allowance	—	—	—	—	Unchanged	[A]
12	Subtotal	\$393,728	\$549,498	\$393,728	\$550,453	—	
13	<u>Operations and Maintenance Costs</u>						
14	Operations and Maintenance	\$5,978	\$15,432	\$5,978	\$15,419	Revised	[B]
15	Risk Based Allowance	—	—	—	—	Unchanged	[A]
16	Subtotal	\$5,978	\$15,432	\$5,978	\$15,419	—	
17	<u>Other Costs</u>						
18	Technology Assessment	\$11,344	\$10,803	\$11,344	\$10,803	Unchanged	[A]
19	Risk Based Allowance	—	—	—	—	Unchanged	[A]
20	Subtotal	\$11,344	\$10,803	\$11,344	\$10,803	—	
21	Total Incremental Costs	\$411,050	\$575,734	\$411,050	\$576,676	—	

**TABLE 7A-5
(TABLE 4A)-
UPDATED ESTIMATES OF ALLOCATED INCREMENTAL BENEFITS
(THOUSANDS OF DOLLARS)**

Line No.		Incremental Benefits				Status Compared to 2017 Update	Section B4 Reference
		2017 Update 2017 GRC, Exh-47		2023 Update			
		Annualized	PVRR	Annualized	PVRR		
1	<u>Operational Benefits</u>						
2	Integrated Connect/Disconnect Switches						
3	Avoided Field Visits	\$(5,929)	\$(78,101)	\$(6,019)	\$(63,968)	Revised	[D]
4	Improved Cash Flow	(475)	(4,214)	(365)	(1,943)	Revised	[D]
5	Reduced Bad Debt	(847)	(6,758)	(647)	(3,211)	Revised	[D]
6	Tax Benefit from Meter Replacement	n/a	(11,398)	n/a	(11,398)	Unchanged	[E]
7	Projected Additional Tax Benefits	n/a	(12,402)	n/a	(22,623)	Revised	[F]
8	Subtotal	\$(7,252)	\$(112,872)	\$(7,252)	\$(103,144)		
9	<u>Energy Conservation/ Demand Response Benefits</u>						
10	Electric Conservation	n/a	–	n/a	–	Unchanged	[G]
11	Gas Conservation	n/a	–	n/a	–	Unchanged	[H]
12	Peak-Time Rebate	n/a	–	n/a	–	Unchanged	[I]
13	TOU	n/a	\$(184,078)	n/a	\$(183,238)	Revised	[J]
14	A/C Cycling	n/a	–	n/a	–	Unchanged	[K]
15	Subtotal	n/a	\$(184,078)	n/a	\$(183,238)		
16	Total Incremental Benefits	n/a	\$(296,951)	n/a	\$(286,381)		

4. Narrative Explanations of Line Items in Updated Tables 3A and 4A

The following are narrative explanations for each line item in updated Tables 3A and 4A. The purpose of the narratives is to explain the revisions to each line item, or the reason for leaving a line item unchanged, or the reason for adding a line item within the tables.

a. Table 3A – Narrative Explanations

[A] – SmartMeter Upgrade Deployment Costs: Most of the line items

(unless specifically identified in [B] and [C] below) in Table 3 relate to SMU program deployment costs which occurred from 2008 to 2013. All of those line items were already updated to reflect actual

costs incurred in the 2017 Update, and therefore have not changed in this 2023 Update. See Exhibit (PG&E-6), WP 7A-1 to 7A-2.

[B] – Meter Devices (Less HAN and Electromechanical Meter Upgrades)

and Operations and Maintenance: There are two line items in Table 3 which in addition to the completed project costs, include forecasted costs over the full 20-year life of the program. Meter Devices includes the incremental cost of providing a new SmartMeter for all new customers over the life of the project, and Operations and Maintenance includes the costs of replacing failed meters during that period. Both line items are driven by the number of SmartMeters currently and forecasted to be deployed in the field.

As part of this 2023 Update, the previous forecast of SmartMeters from 2017 to 2020 was updated with actual SmartMeter deployment counts for those years. In addition, the forecast of new customers requiring a SmartMeter from 2021 and beyond was updated based on the latest forecast of growth assumptions in PG&E's territory. These updated SmartMeter volumes are slightly lower than the previous forecast, and as a result, the related costs are also slightly lower than the 2017 Update. (See Exhibit (PG&E-6), WP 7A-20 and the resulting impacts to Exhibit (PG&E-6), WPs 7A-1 to 7A-8.)

[C] – Time-of-Use (TOU) Program Costs: The other line item in Table 3 that includes costs over the 20-year life of the SMU Program relates to TOU Program Costs. Costs for this line item have been updated as follows:

- Previously forecasted costs for 2017-2020 have been updated to reflect actual costs incurred, as reported in the most recent PG&E Quarterly Report of Progress of Residential Rate Reform filed in February 2021.
- The forecasted costs for 2021 and 2022, when added to the actual reported costs for 2020, bring the total forecasted costs from 2020 to 2022 to \$62.7 million, as set forth in the Settlement Agreement of the 2020 GRC of PG&E.

- For years beyond 2022, PG&E assumed \$3 per customer per year for outreach (consistent with the 2017 Update) to an estimated 2.7 million TOU customers in 2022, and then adjusted for growth in new customers through the end of the program as described above. (See Exhibit (PG&E-6), WPs 7A-1 to 7A-2, 7A-18.)

b. Table 4A – Narrative Explanations

[D] – Integrated Connect/Disconnect Switches: In addition to updating the projected number of SmartMeters with Remote Connect/Disconnect capabilities deployed in the field based on updated customer growth rates, there were several other developments that have significantly impacted the policies for implementing Shut-Offs for Non-Payments, and therefore the usage of the Remote Connect/Disconnect capability.

Table 7A-6 summarizes the resolutions and decisions impacting the usage of Integrated Connect/Disconnect Switches:

**TABLE 7A-6
REGULATORY HISTORY**

Line No.	Date	Reference	Description
1	11/2017	Resolution (Res.) M-4833	Resolution suspended disconnections for non-payment related to the October 2017 California Wildfires.
2	1/2018	Res.M-4835	Resolution suspended disconnections for non-payment related to the December 2017 California Wildfires.
3	5/2019	D.19-05-037	Decision in PG&E's 2019 Wildfire Mitigation Plan Pursuant to Senate Bill (SB) 901 suspended disconnections for non-payment in areas impacted by wildfires.
4	4/2020 2/2021	Res.M-4842 Res.M-4849	Emergency Authorization and Order Directing Utilities to Implement Emergency Customer Protections to Support California Customers During the COVID-19 Pandemic, which implemented a moratorium on all service disconnections for non-payment throughout PG&E's service territory due to the statewide health emergency. Res.M-4849 extended the moratorium related to the COVID-19 Pandemic through June 30, 2021.
5	6/2020	D.20-06-003	In response to the Service Disconnections Order Instituting Rulemaking 2018 (Rulemaking 18-07-005) and SB 598, this decision requires a more comprehensive plan to reduce the statewide disconnection rates of gas and electric utility customers. In addition to impacting the historical counts of electric disconnections for non-payment, this decision sets targets of a maximum of 4 percent disconnections in 2021 and 2022, and then a further reduction to 3.5 percent beginning in 2023 and thereafter

Both the actual number of connects and disconnects performed remotely from 2017 to 2020, as well as the forecasted usage of remote connect/disconnect capability going forward has been reduced significantly from previous forecasts. The capability to perform remote connects and disconnects exists as planned, but policy directives may continue to limit the usage of that capability, resulting in a decrease in the achieved and forecasted benefits of this capability.

[E] – Tax Benefit from Meter Replacement: This benefit is related to the deployment of the SmartMeter Program, which was completed in 2013. As a result, there is no change to the value of this benefit as

1 calculated and presented in the 2017 Update. (See Exhibit
2 (PG&E-6), WP 7A-21.)

3 [F] – Projected Additional Tax Benefits: In the 2017 Update, PG&E had
4 identified incremental tax benefits associated with shortened
5 depreciation lives of SmartMeter assets, above those already
6 reflected in Table 3. At that time, the Internal Revenue Service had
7 released a Technical Advice Memorandum supporting PG&E's
8 position on electric meters, but the position of the California
9 Franchise Tax Board (FTB) was not clear. As a result, in the 2017
10 Update, PG&E only included the incremental tax benefits of a
11 shorter tax life for Federal Tax purposes in Table 4.

12 Since then, the FTB has reviewed tax years where PG&E has
13 claimed depreciation based on the shorter asset lives, and the FTB
14 has not raised any issues to date regarding this shorter tax life for
15 SmartMeter assets. Given this reduction in uncertainty, PG&E now
16 includes the approximately \$10.3 million of additional incremental
17 benefits in Table 4, raising the value of this benefit from
18 approximately \$12.3 million to approximately \$22.6 million.

19 In addition, the Projected Additional Tax Benefits are partially
20 driven by the forecast of new meters to be deployed for customer
21 growth. As noted above, this analysis has been updated for actual
22 customer growth from 2017 to 2020, and a more current future
23 forecast of customer growth for the years 2021 and beyond,
24 resulting in an updated calculation of the value of these benefits
25 (See Exhibit (PG&E-6), WP 7A-9 to 7A-10).

1 [G] – Electric Conservation: In the original SMU application, PG&E
2 included benefits associated with connection of In-Home Display
3 devices developed by third-party vendors to PG&E's HAN.
4 As described in the 2017 Update, that market has not developed as
5 anticipated, and while PG&E sustains HAN capability for the benefit
6 of the installed user base, customer devices connected to the PG&E
7 HAN remain minimal. Therefore, for purposes of this cost
8 effectiveness update, PG&E continues to exclude this benefit.

9 [H] – Gas Conservation: This line item is unchanged. It was not
10 adopted in D.09-03-026.

11 [I] – Peak-Time Rebate (PTR): This line item is unchanged, and the
12 benefits associated with PTR continue to be excluded from this
13 analysis.

14 [J] – Time-of-Use (TOU): In place of PTR, PG&E added estimates for
15 the benefits of TOU programs in the 2017 Update. PG&E has
16 updated the avoided cost of capacity megawatt estimates, and the
17 energy conservation gigawatt-hour estimates based on actual
18 results of the TOU programs in terms of customer participation and
19 response. In addition, PG&E has updated the market-based power
20 pricing assumptions based on the most recent E3 Avoided Cost
21 Calculator (ACC). The Power Price Forecast in the 2021 ACC has
22 declined since the 2017 Update, resulting in a slight decrease in the
23 energy conservation benefits associated with TOU. (See Exhibit
24 (PG&E-6), WP 7A-22.)

25 [K] – A/C Cycling: As described in the 2017 Update, it is still unclear at
26 this time if or when Programmable Communicating Thermostats
27 (PCT) will be required by residential building codes. Therefore,
28 PG&E continues to exclude the benefits associated with supporting
29 a PCT direct load control program from this SMU cost effectiveness
30 analysis.

1 **C. Additional Unquantified Benefits**

2 As discussed in PG&E's December 1, 2015 report,⁴ there are other potential
3 incremental future potential benefits from SMU technology, primarily related to
4 Electric Program Investment Charge and Smart Grid programs and other pilots,
5 which are not reflected in the tables or the narrative explanations above.⁵

6 One example of a program with unquantified benefits of SmartMeter
7 technology that has been implemented since the 2017 Update, and is in place
8 and providing benefits today, relates to hot socket detection. Hot sockets can
9 occur when socket jaws at the meter panel have deteriorated or been
10 compromised such that arcing is taking place, causing high temperature
11 conditions and a potential safety hazard at the meter socket. In addition to
12 billing data, SmartMeters provide data such as temperature and load, which can
13 be used to diagnose the health of the meter socket. PG&E has proactively
14 collected temperature and load data from SmartMeters on a daily basis, and the
15 data is used to generate reports of meters which exceed critical thresholds.
16 Field orders are created and completed by electric meter technicians within
17 24 hours, and as a result, faulty meter sockets are replaced before a
18 catastrophic failure occurs. PG&E has refined the thresholds and criteria used
19 in this process over time to reduce false positive identification of risk conditions,
20 and has improved the success rate of hot socket identification to over 80 percent
21 of all field such orders by the end of 2020. From January 2019 through March
22 2021, this process has successfully detected and remediated 306 hot sockets,
23 preventing 306 safety hazards to PG&E customers and the general public.

24 Another example of the use of SmartMeter data to identify potential safety
25 hazards relates to the Partial Voltage Detection program (formerly known as
26 Enhanced Wires Down Detection). As more thoroughly described in PG&E's
27 2021 Wildfire Mitigation Plan Report filed in February of 2021, PG&E has now

4 D.15-07-008, pp. 34-35, OP 5, updated analysis of the cost-effectiveness of its SmartMeter Update.

5 For example, among others, PG&E discussed potential benefits associated with Volt/VAR Optimization (VVO) in the December 1, 2015 report. Since the time that report was filed, PG&E filed Advice Letter (AL) 4990-E, which estimated a range of net benefits for VVO of \$92 million to \$295 million on a total resource cost basis. While SMU potentially supports and enhances a portion of VVO benefits, the report filed in AL 4990-E does not identify what portion that may be. For that reason, PG&E has not included these costs and benefits in Tables 3 and 4.

1 enabled 4.5 million Single-Phase SmartMeters to send real time alarms
2 occurring in the Distribution Management System under partial voltage
3 conditions. During 2021, this capability will be expanded to include an additional
4 365,000 Three-Phase SmartMeters. Partial voltage conditions can indicate the
5 loss of phase/conductor and downed power lines on the distribution circuit.
6 Real-time alerts allow Control Center Operations to dispatch field personnel to
7 locations where equipment may be in a condition that increases wildfire risk.
8 This enhanced situational awareness can help detect and locate downed
9 distribution lines more quickly, enable faster response to reduce the amount of
10 time that a line is down, and allow first responders to more quickly extinguish
11 wire down-related ignitions, if they occur.

12 PG&E has not attempted to quantify the dollar benefit of using SmartMeter
13 data to identify meter socket safety hazards, downed power line situations, or
14 other safety improvements due to the difficulty and subjectivity of doing so.
15 However, these programs are critical components of PG&E's ongoing
16 commitment to wildfire prevention and safety improvements. These programs
17 would not be possible without the solid state electric meters deployed as part of
18 the SMU Program. PG&E believes these existing benefits, and similar future
19 potential benefits are an important aspect of evaluating the cost effectiveness of
20 the SMU technology.

PACIFIC GAS AND ELECTRIC COMPANY
CHAPTER 8
COMPLIANCE AND REGULATORY STRATEGY

PACIFIC GAS AND ELECTRIC COMPANY
CHAPTER 8
COMPLIANCE AND REGULATORY STRATEGY

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PACIFIC GAS AND ELECTRIC COMPANY

CHAPTER 8

COMPLIANCE AND REGULATORY STRATEGY

A. Introduction

1. Scope and Purpose

This chapter demonstrates that Pacific Gas and Electric Company's (PG&E or the Company or the Utility) expense forecast for the Compliance & Regulatory Strategy¹ Department is reasonable and should be approved by the California Public Utilities Commission (CPUC or Commission). This chapter also requests approval of PG&E's Operational Management (OM) expense forecast for the entire Customer Care organization.²

Compliance and Regulatory Strategy oversees the following functions: regulatory strategy; customer experience and insights; tariff interpretation; risk, compliance, audit; and customer and employee privacy. The department provides subject matter expertise, program management, governance, and strategic guidance to support managing these key areas. Specifically, Compliance and Regulatory Strategy provides regulatory strategy, risk, compliance, and audit support for the Customer Care organization, and customer and employee privacy, customer experience and insights, and tariff interpretation support for the entire Company.

¹ Formerly known as the Customer Care Regulatory Policy and Compliance department in PG&E's 2020 General Rate Case (GRC).

² The Major Work Category (MWC) OM forecast requested in this chapter includes the OM costs for the following chapters in the Customer and Communications exhibit: Ch. 2 (Customer Engagement); Ch. 3 (Pricing Products and Income-Qualified Programs); Ch. 4 (Contact Centers, Customer Technology and Digital Strategy); Ch. 5 (Customer Service Offices); Ch. 6 (Billing, Revenue and Credit); Ch. 7 (Metering Services and Engineering); Ch. 8 (Compliance and Regulatory Strategy); and Ch. 9 (Gas AMI Module Replacement). Ch. 1A (Regional Vice Presidents) presents its own OM forecast. OM costs are not applicable to Ch. 10 (Customer Care Technology Projects) because its forecasts are for technology projects and investments. OM costs are not applicable to Ch. 11 (Communications), because Communications is an Administrative and General organization.

2. Summary of Request

a. Expense

PG&E requests that the Commission adopt its 2023 expense forecast of \$21.4 million³ which includes \$16.0 million⁴ for Compliance and Regulatory Strategy in MWC EZ, and \$5.4 million⁵ for Customer Care's MWC OM costs. The total forecast represents a \$4 million (or 23 percent) increase compared to 2020 recorded adjusted costs of \$17.4 million.⁶ The increase is primarily attributable to ongoing compliance activities for the California Consumer Privacy Act of 2018 (CCPA)⁷ and new compliance activities due to the recent passage of the California Privacy Rights and Enforcement Act of 2020 (CPRA).⁸

**TABLE 8-1
FORECAST EXPENSES
(THOUSANDS OF NOMINAL DOLLARS)**

Line No.	Major Work Category (MWC)	Description	2020 Recorded Adjusted	2021 Forecast	2022 Forecast	2023 Forecast	Workpaper Reference
1	EZ	Manage Var Cust Care Processes	\$15,073	\$12,684	\$12,037	\$15,977	WP 8-3, lines 1, 6, 11 and 17
2	OM	Operational Management	2,798	3,345	3,451	5,375	WP 8-4, lines 1, 3, 5 and 7
3	OS	Operational Support	(489)	—	—	—	WP 8-5, line 1
4		Total	\$17,382	\$16,028	\$15,488	\$21,352	WP 8-1, line 4

b. California Consumer Privacy Act Memorandum Account

PG&E requests approval to close the California Consumer Privacy Act Memorandum Account (CCPAMA) effective December 31, 2022, and include \$6.0 million in its 2023 expense forecast to continue compliance-related activities for CCPA, and to implement new

³ Exhibit (PG&E-6), WP 8-1, line 4, recorded adjusted and forecast expenses.

⁴ Exhibit (PG&E-6), WP 8-1, line 1, recorded adjusted and forecast expenses.

⁵ Exhibit (PG&E-6), WP 8-1, line 2, for recorded adjusted and forecast expenses.

⁶ Exhibit (PG&E-6), WP 8-1, line 4.

⁷ Civil Code §§ 1798.100 et seq.; Assem. Bill No. 375 (2017-2018 Reg. Sess.), Ch. 55; SB 1121 (2017-2018, Reg. Sess.), Ch. 735.

⁸ Civil Code §§ 1798.100 et seq.

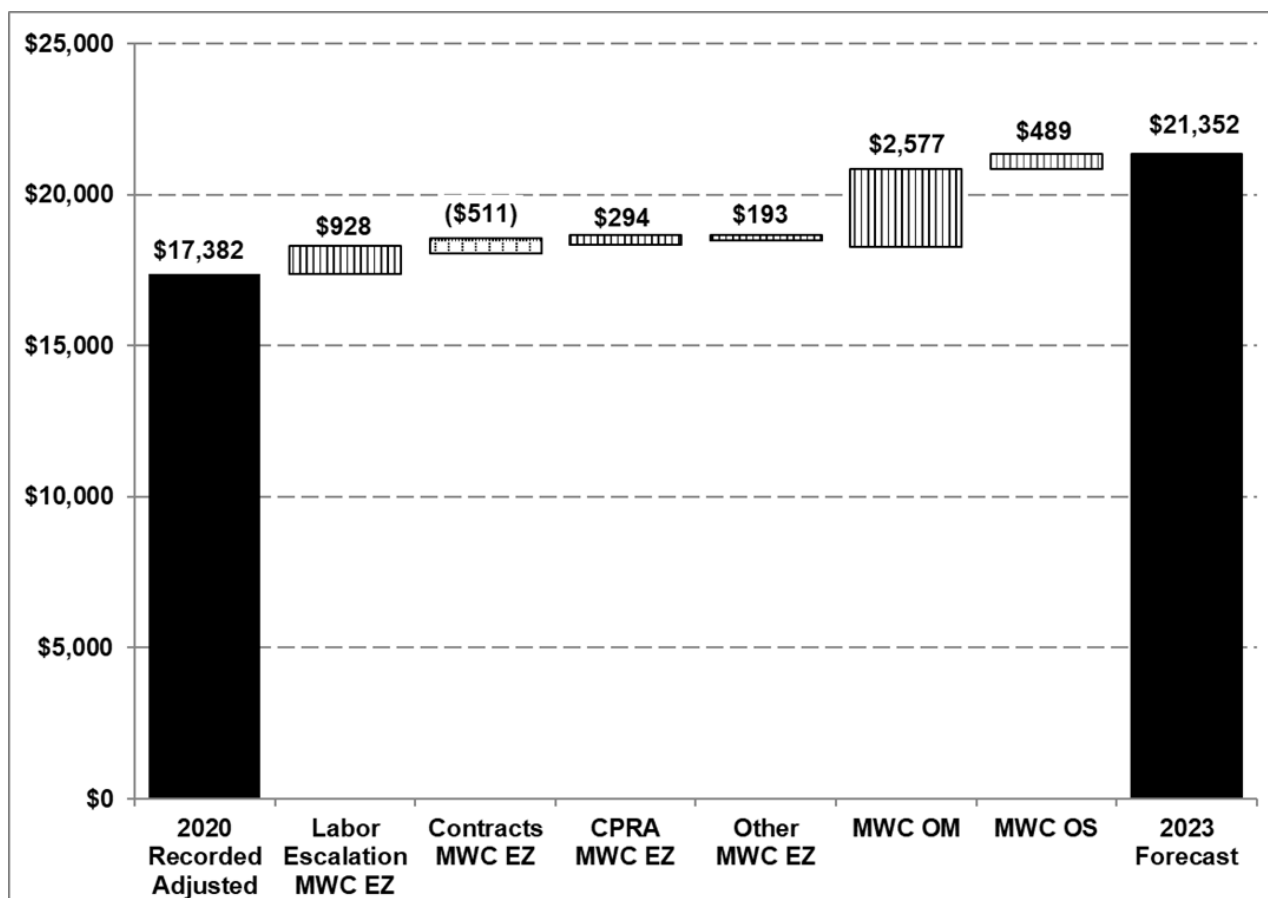
compliance activities for CPRA.⁹ PG&E discusses its request to close the CCPAMA in Section F below.

3. Overview of Recorded and Forecast Costs

a. Expense

Figure 8-1 below shows the change from the 2020 recorded adjusted expense to the 2023 forecast. The activities that form the basis for the forecast are described in Section B.1.b. below. The forecast drivers are discussed in Section C.1. below.

FIGURE 8-1
COMPLIANCE AND REGULATORY STRATEGY
EXPENSE WALK (2020-2023)
(THOUSANDS OF NOMINAL DOLLARS)



⁹ PG&E also requests \$8.0 million in technology costs to implement CPRA. See Exhibit (PG&E 6), Ch. 10, for a discussion of these costs.

4. Support for Request

PG&E's expense forecast for Compliance and Regulatory Strategy is reasonable because it enables PG&E to:

- Address policy directives and work with key stakeholders to drive regulatory outcomes that support a positive customer experience;
- Use quantitative and qualitative research techniques to gain customer insight that drive and optimize strategies for effective customer communications and services;
- Lead Customer Care's risk and compliance programs by providing subject-matter expertise, program management, governance, and strategic guidance to support operations teams;
- Play a key enterprise-wide role in protecting customer, employee and other personal data privacy and monitoring PG&E's compliance with the CPUC Privacy Rules, CCPA, CPRA, and other legal and regulatory mandates regarding data privacy and information security;
- Oversee the alignment of Customer Care's strategic initiatives within the annual enterprise-wide integrated planning and compliance process.

As described in this chapter, the 2023 forecast will allow Compliance and Regulatory Strategy to provide an appropriate level of support to Customer Care and the Company for these important activities.

5. Organization of the Remainder of This Chapter

The remainder of this chapter is organized as follows:

- Section B – Program and Risk Overview;
- Section C – Activities, Costs, and Forecast Drivers by MWC;
- Section D – Estimating Method;
- Section E – Compliance with Prior Commission Decisions;
- Section F – Balancing and Memorandum Accounts; and
- Section G – Cost Tables.

B. Program and Risk Overview

1. Program Description

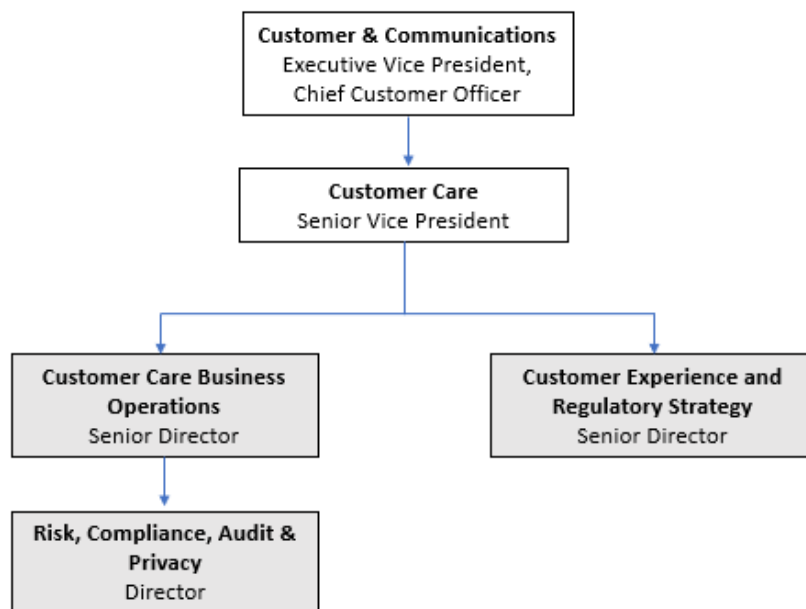
a. Management Structure

Compliance and Regulatory Strategy comprises two departments: Customer Experience and Regulatory Strategy (CERS) and Business

Operations. CERS consists of three teams reporting to a Senior Director: (1) Regulatory Strategy; (2) Customer Experience and Insights; and (3) Tariff Interpretation. Business Operations is led by a Senior Director and includes the following teams: (1) Risk, Compliance and Audit; and (2) Privacy.

The CERS Senior Director and the Business Operations Senior Director report directly to Customer Care's Senior Vice President as illustrated in Figure 8-2 below.

**FIGURE 8-2
ORGANIZATIONAL STRUCTURE FOR COMPLIANCE & REGULATORY STRATEGY**



b. Program Overview

1) Regulatory Strategy

Regulatory Strategy oversees a high volume of regulatory proceedings for the Customer Care organization and aims to:

- Drive visibility on regulatory directives and proceedings to identify, anticipate, and address opportunities, gaps, and challenges;

- Develop coordinated implementation strategies to operationalize policy directives and commitments in a cost-efficient and timely manner; and
- Provide case management support, including guidance on cost-recovery mechanisms, data requests, and regulatory proceedings, including the GRC, Emergency Disaster Relief, Disconnections, and De-Energization Order Instituting Rulemakings (OIR).

2) Customer Experience and Insights

The Customer Experience and Insights¹⁰ team aims to continually improve PG&E customers' experiences by analyzing customer satisfaction, identifying areas for improvement, and working cross-functionally to implement solutions. The team uses various research tools and data methodologies to uncover drivers of customer satisfaction and develop actionable insights that influence strategy and improve the customer experience.

Some examples of work that have had significant impact on strategy and other decisions include:

- Hard-to-Reach Customers – Leveraging customer data to gain a deeper understanding of hard-to-reach audiences (including language and other barriers) to test and inform outreach;
- Customer Payment Support Programs – Using research to better understand and assess how to assist customers with payment-related products and services; and
- Website functionality – Collaborating with Digital Strategy to leverage customer input and testing in the design and usability

¹⁰ During the 2020 GRC Proceeding, Customer Experience and Customer Insights were separate teams reporting to two different departments: Customer Engagement A.18-12-009, HE-91: Exhibit (PG&E-6), Ch. 2) and Corporate Affairs A.18-12-009, HE-157: Exhibit (PG&E-9), Ch. 8). The teams merged in 2020 and moved to the Customer Experience & Regulatory Strategy Department to bring together data-driven insights and customer experiences to enhance the customer perspective in our regulatory proceedings. The merger helps us bring closer alignment to customer needs and wants to the development of our products and services.

of PG&E's online tools, including pge.com website,
Your Account, emergency communications, and notifications.

3) **Tariff Interpretation**

The Tariff Interpretation team provides support to organizations across PG&E that require guidance on how the Company's tariffs apply to customers and business operations. The guidance ensures consistent and compliant application of tariffs and supporting practices across the enterprise. Specifically, the Tariff Interpretation team provides the following support services:

- Tariff Interpretation and Application – Administering, interpreting, and modifying tariffs to ensure that employees address customer and operational needs consistently and in compliance with CPUC rules (e.g., developing new or modified tariffs to meet business and regulatory needs related to microgrids);
- Tariff Education – Providing enterprise-wide trainings on the meaning of specific tariffs and how they apply to various business units, as well as how to access and use online tariff tools; and
- Customer Standby and Departed Load – Overseeing the contract process to ensure that customers fulfill contract requirements.

4) **Risk, Compliance and Audit**

The Risk, Compliance and Audits team identifies and helps remediate operational and business risks and supports the development and management of compliance processes for the Customer Care organization. The Risk and Compliance team is responsible for the following activities:

- Conducting organization-wide risk evaluations of identified risks in accordance with PG&E's Enterprise and Operational Risk Management Program standards and tools, and supporting the organization in the Company's risk identification and risk mitigation processes;

- Maintaining an inventory of CPUC and other state and federal compliance requirements that govern Customer Care work processes;
- Managing the Sarbanes-Oxley controls-testing in accordance with Corporate Accounting guidelines to ensure the accuracy of PG&E's financial statements; and
- Conducting gap remediation activities, including control design and implementation.

The Audit team centrally manages Customer Care's internal and external audits, standardizes processes throughout the organization to facilitate and expedite audits, and supervises sustainable and effective remediation of identified issues. The team is responsible for the following activities:

- Monitoring internal and external audit activity within the organization; and
- Overseeing the development and monitoring of action plans for the timely and sustainable remediation of any audit findings.

5) Privacy

PG&E is committed to protecting customer and employee privacy and supports privacy rights of all California residents. The data privacy landscape has shifted dramatically in recent years. Supporting data privacy initiatives is a critical component of earning and maintaining public trust.

The Privacy team¹¹ is a centralized governance team that provides enterprise-wide guidance on comprehensive privacy policies and data governance strategies. The function has become especially critical as consumers now want more control of their personal data and legislators continue to pass laws that address consumer privacy concerns. PG&E's customers and employees rely on PG&E to serve as a good steward of their confidential information. In support of those efforts, the team's responsibilities include the following activities:

¹¹ Formerly known as Customer and Employee Data Privacy in PG&E's 2020 GRC.

- Management and Governance – Providing oversight through centralized management of a structured program that defines company responsibilities and operational plans through documented standards and procedures;
- Data Subject Requests – Managing consumer access and deletion requests as defined under CCPA;
- Privacy Risk Assessments – Identifying and mitigating risks related to privacy controls and potential and actual data losses;
- Education and Awareness – Training employees on compliance with PG&E's privacy standards and how to mitigate the risk of data loss;
- Tools – Identifying and deploying tools to enhance the effectiveness of customer and employee data protection, including customer interfaces, employee interfaces, monitoring tools, and management of privacy controls;
- Compliance – Overseeing PG&E's compliance with CPUC privacy rules and other legal requirements, such as CCPA and CPRA, the California Data Breach Notification Law (CA Civil Code 1798.82), the Children's Online Privacy Protection Act, and the Health Insurance Portability and Accountability Act (HIPAA);
- Data Loss Response – Coordinating customer and employee privacy data loss investigations, data breach recovery activities and consumer notifications and identity protection services, as applicable; and
- Independent Audit – Overseeing the CPUC mandated Covered Information Privacy and Security Assessment Report (Customer Privacy Audit),¹² as filed with the GRC.

¹² See Attachment A, CPUC Covered Information Privacy and Security Assessment Report. For the period January 1, 2020 through December 31, 2020, dated May 28, 2021.

2. Risk Overview

a. Data Loss Event (DLE) – Description

A DLE is defined as a confirmed incident in which sensitive, confidential or otherwise protected data has been accessed and/or disclosed in an unauthorized fashion.¹³ The DLE risk was not included in PG&E's 2020 Risk Assessment Mitigation Phase (RAMP) Report.¹⁴ The overall DLE risk is managed in PG&E's Cybersecurity organization.¹⁵ However, PG&E's Privacy team (under the Customer Care organization) shares responsibility for managing DLE risk by investigating all potential DLEs involving customer and employee data.

Personal information (PI) is data that could be used to reasonably identify a person including a California consumer or household, PG&E customer, PG&E employee or non-employee worker, or other individuals. Potential DLEs involving PI are reported to the Privacy team for investigation and resolution. The Privacy team also investigates DLEs involving:

- Covered Information – Defined in PG&E Electric and Gas Rule 27 (Privacy and Security Protections for Energy Usage Data) as energy usage information when associated with any other data that can reasonably identify an individual, family, household, residential or non-residential PG&E customer.
- Sensitive Information – Newly-defined under CPRA as personal data that can be used to make inferences about a consumer; this includes account log-in credentials, financial information, geolocation information and health data.
- Protected Health Information (PHI) – Any information about health status, care or payment for health care that can be linked to an individual.
- Any additional PI that is protected under California Civil Code Section 1798.

¹³ Exhibit (PG&E-2), p. 1-31, Attachment A, Table 1-1.

¹⁴ See A.20-06-012.

¹⁵ See Exhibit (PG&E-7), Ch. 9, for a detailed description of the DLE risk.

b. DLE – Controls

The Privacy team has several controls in place to help mitigate data loss:

- Annual Security and Privacy training for all employee and non-employee workers; targeted Privacy training for personnel who work with personal data and HIPAA training for personnel who work with PHI.
- Regular Privacy communications to reinforce best practices and build program awareness.
- Written standards, policies, and procedures outlining personnel responsibilities when working with personal data.
- Privacy risk assessments that regularly review new and existing programs.
- Data protection tools that enhance customer and employee privacy.
- Classifying data to understand risk and create data governance policies that define data ownership, roles, and responsibilities.
- Providing remediation support and tracking remediation activities to closure.

C. Activities, Costs, and Forecast Drivers by MWC

1. Expense MWCs

a. MWC EZ – Manage Various Customer Care Processes

MWC EZ includes labor and employee-related costs to perform customer service-related activities—such as customer satisfaction surveys and customer research—to improve the customer experience, and to provide internal support for regulatory case management, tariff interpretation, risk mitigation and compliance, and privacy activities. Table 8-2 below shows MWC EZ costs for the Compliance and Regulatory Strategy Department.

The 2023 expense forecast for MWC EZ is \$16.0 million. The 2023 forecast drivers include the following:

1) Labor Escalation

The 2023 forecast includes \$297,000 for labor escalation based on the escalation rates described in Exhibit (PG&E-8), Chapter 4.

2) Contracts

Compliance and Regulatory Strategy is forecasting \$3.3 million in contract costs for 2023. This is a reduction in spend of \$511,000 from 2020.

The costs for 2023 include \$2.3 million to support new activities for the CPRA. CPRA is an addendum to the 2018 CCPA and expands the privacy rights of California residents, including the addition of stricter regulations for businesses processing PI. Compliance with CPRA will require new solutions that address expanded opt-out and consent requirements, a new category of “sensitive” PI and a defined timeline for deletion.

The additional \$1.0 million includes \$457,000 to support Voice of the Customer technology to better prioritize customer experience improvement work by modernizing customer survey tools and platform, and \$528,000 to reprioritized work.

3) CPRA

Compliance and Regulatory Strategy anticipates adding five Full-Time Employees to support CPRA compliance activities. The 2023 forecast to support the increase in headcount is \$294,000.

4) Other

The 2023 expense forecast for MWC EZ includes \$64,000 due to non-labor escalation based on the escalation rates described in Exhibit (PG&E-12), Chapter 3.

b. MWC OM – Operational Management

MWC OM includes labor and employee-related costs to provide supervision and management support. It also includes costs incurred by the administrative staff working for the Supervisors and Managers; Table 8-2 below shows the total MWC OM costs for the entire Customer Care organization, including the Compliance and Regulatory Strategy Department.

The 2020 recorded adjusted expense for MWC OM is \$2.8 million and the 2023 expense forecast is \$5.4 million. The increase is primarily due to the addition of \$1.9 million in Customer Care officer salaries

(excluded from the 2020 GRC),¹⁶ and labor escalation for management leaders in the Customer Care organization.

c. MWC OS – Operational Support

The 2020 recorded adjusted expense for MWC OS was a credit of \$489,000. PG&E is not forecasting additional OS expenses beyond 2020. The Customer Care organization had historical OS costs primarily in the Field Metering organization, but an adjustment was made to Customer Care’s 2020 OS costs after the 2020 GRC filing due to the transfer of the Field Metering Services department to the Electric Distribution Operations LOB.

D. Estimating Method

Compliance and Regulatory Strategy’s 2023 expense forecast was developed using recorded adjusted 2020 expenses as a base. These recorded adjusted expenses were adjusted for labor and non-labor escalation, consistent with escalation rates described in Exhibit (PG&E-8), Chapter 4, and Exhibit (PG&E-12), Chapter 3, respectively. Further adjustments were made to reflect changes in program activity, as described elsewhere in this chapter.

E. Compliance with Prior Commission Decisions

1. Compliance With Section 5.2 of the 2020 GRC Settlement Agreement (“Deferred Work Principles”)

Section 5.2 of the 2020 GRC Settlement “Deferred Work Principles” requires PG&E to include testimony in the 2023 GRC on “deferred work” where the following criteria are met:

- 1) The work was requested and authorized based on representations that it was needed to provide safe and reliable service;
- 2) PG&E did not perform all of the authorized and funded work, as measured by authorized (explicit or imputed) units of work; and

¹⁶ In its 2020 GRC, PG&E excluded the costs of all Utility and Corporation Officers from its forecast. In the 2023 GRC, pursuant to CPUC Resolution E-4963 (Issued Dec. 14, 2018) PG&E excluded from its 2023 forecast the salary and benefits of the Utility’s Securities and Exchange Commission (SEC) Rule 240.3b-7 Officers. PG&E has also voluntarily excluded from its 2023 forecast the salary and benefits of the PG&E Corporation’s SEC Rule 240.3b-7 Officers although not required by the resolution. See Exhibit (PG&E-8), Ch. 4 for further discussion of Officer compensation costs.

3) PG&E continues to represent that the curtailed work is necessary to provide safe and reliable service.

To analyze whether criterion (1) is met, PG&E reviewed its 2020 GRC testimony for Customer and Communications to determine, for each MWC, whether its prior testimony stated that the work was needed for safety and/or reliability. Next, to analyze whether criterion (2) is met, PG&E compared its 2020 recorded adjusted costs and 2021 and 2022 forecast to PG&E's calculation of the imputed units for the period 2020-2022. Under PG&E's analysis, criterion (2) applies where PG&E's 2020 recorded adjusted costs and 2021 and 2022 forecast indicates that the imputed units of work will not be completed by the end of 2022. Finally, to analyze whether criterion (3) is met, PG&E reviewed its testimony to establish whether it is again proposing the same work for safety and/or reliability.

PG&E has performed this analysis for all work within Customer and Communications.¹⁷ After performing the above analysis, PG&E determined that it is not requesting funding in this GRC for any Customer and Communications work meeting the definition of "deferred work" under the 2020 GRC Settlement Agreement.

2. Smart Grid Privacy OIR Decision GRC Compliance

In the Smart Grid Privacy OIR, Decision (D.) 11-07-056, the Commission ordered:

Each electrical corporation shall conduct an independent audit of its data privacy and security practices in conjunction with GRC proceedings following 2012 and at other times as required by order of the Commission. The audit shall monitor compliance with data privacy and security commitments, and the electrical corporation shall report the findings to the Commission as part of the utility's GRC filing.¹⁸

¹⁷ Exhibit (PG&E-6), WP 8-9 to WP 8-10, PG&E's deferred work analysis for Customer and Communications. The analysis includes work PG&E identified in its 2020 GRC testimony that was requested and authorized for safety and/or reliability. The analysis also includes all metering work, even though not all metering work was requested and authorized for safety and/or reliability, since it generally supports system reliability. The analysis also includes MWCs with revenue assurance work since part of revenue assurance work relates to safety.

¹⁸ D.11-07-056, p. 94, 9(d).

The information for the 2020 assessment is contained in Attachment A of this chapter.

F. Balancing and Memorandum Accounts

1. CCPA Memorandum Account

CCPA was promulgated by Assembly Bill 375 and Senate Bill 1121 and signed into law by Governor Brown on June 28, 2018.¹⁹ CCPA requires PG&E,

on the consumer's request, to disclose what data they collect with respect to them, furnish that data to the consumer upon request, permit the consumer to opt out from the transfer of that data, inform the [customer] as to whom their data was disclosed, and delete that data (subject to exceptions)....²⁰

PG&E submitted Application (A.) 19-03-020²¹ on March 27, 2019 to create a memorandum account to retroactively record and track incremental costs associated with CCPA compliance. The Commission approved A.19-03-020 via D.19-09-026 and directed PG&E to establish the CCPAMA to track incremental costs to implement the CCPA.²² The Commission approved PG&E's request to establish the CCPAMA in Advice Letter 4160-E/5657-E, effective October 11, 2019.

On November 3, 2020, California voters passed Proposition 24, otherwise known as CPRA. CPRA is an addendum to CCPA and expands the privacy rights of California residents, including the addition of stricter regulations for businesses processing PI.

PG&E is not requesting recovery of 2019-2022 CCPA and CPRA costs in this GRC. Costs incurred through 2022 will be recovered annually through the Wildfire Mitigation and Catastrophic Event Application. In this GRC, PG&E requests approval to close the CCPAMA effective

¹⁹ Civil Code §§ 1798.100 et seq.; Assem. Bill No. 375 (2017-2018 Reg. Sess.), Ch. 55; SB 1121 (2017-2018, Reg. Sess.), Ch. 735.

²⁰ D.19-09-026, pp. 2-3.

²¹ A.19-03-020, application of PG&E for Approval of Memorandum Account to Record and Track Incremental Costs of Implementing CCPA of 2018.

²² D.19-09-026, p. 14, Ordering Paragraph 1.

1 December 31, 2022 and include \$6.0 million costs to implement CCPA and
2 CPRA in its 2023 GRC forecast.

3 **G. Cost Tables**

4 Table 8-2 shows Recorded Adjusted expenses by MWC for 2016 through
5 2020 and Forecast expenses by MWC for 2021 through 2023.

TABLE 8-2
EXPENSES BY MWC
(THOUSANDS OF NOMINAL DOLLARS)

Line No.	MWC	Description	Recorded Adjusted					Forecast		
			2016	2017	2018	2019	2020	2021	2022	2023
1	EZ	Manage Var Cust Care Processes	\$10,602	\$10,974	\$10,708	\$13,268	\$15,073	\$12,684	\$12,037	\$15,977
2	OM	OM	7,634	4,468	4,050	4,469	2,798	3,345	3,451	5,375
3	OS	Operational Support	(1,423)	(5,018)	(4,462)	(239)	(489)			
4	Total		\$16,813	\$10,425	\$10,296	\$17,499	\$17,382	\$16,028	\$15,488	\$21,352

PACIFIC GAS AND ELECTRIC COMPANY
CHAPTER 8
ATTACHMENT A
CPUC COVERED INFORMATION PRIVACY AND SECURITY
ASSESSMENT REPORT



Pacific Gas & Electric Company

CPUC Covered Information Privacy and Security Assessment Report

For the period January 1, 2020
through December 31, 2020

May 28, 2021

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Document structure

This report consists of the following sections:

Executive summary – an overview of the project including background, scope, and KPMG’s overall results and noted exceptions and recommendations, where necessary, for each Rule comprising the *California Public Utility Commission Privacy Decision*.

Project approach and methodology – an overview of key project phases and activities performed by KPMG throughout the course of the assessment.

Rule assessment results, exceptions and recommendations – a summary of KPMG’s assessment associated with each of the nine (9) Rules of the *CPUC Privacy Decision* including KPMG’s interviews and document reviews (e.g., test work), overall results, detailed exceptions, and improvement recommendations associated with each exception.

PG&E’s Management Response to CPUC Covered Information Privacy and Security Assessment Report – PG&E’s Management Response to the *CPUC Covered Information Privacy and Security Assessment Report* dated May 28, 2021.

Appendix I – Detailed assessment procedures and results – the full details of KPMG’s assessment criteria, procedures and results for each Rule.

Appendix II – Abbreviations used in this report – a list of the abbreviations and acronyms used throughout the course of the Report.

Appendix III – Stakeholders interviewed – a list of each stakeholder interviewed by KPMG throughout the course of the assessment.

Executive summary

Through its SmartMeter and meter-to-cash operations, Pacific Gas & Electric Co. (hereinafter “PG&E”, the “Utility” or “Company”) collects, processes, stores, and discloses Customer Energy Usage Data (CEUD) and other Customer Personally Identifiable Information (PII). The PII contains names, addresses, social security numbers, service account numbers, and financial account information. When combined, CEUD and PII represent Covered Information.

Background

On July 29, 2011, the California Public Utilities Commission (CPUC) issued Decision D.11-07-056 “Rules Regarding Privacy and Security Protections for Energy Usage Data” and Decision D.14-12-004 “Decision Extending Privacy Protections to Customers of Gas Corporations and Community Choice Aggregators and to Residential and Small Commercial Customers of Electric Service Providers” (hereinafter the “Privacy Decision”). The Privacy Decision requires PG&E to undergo an independent assessment of its Covered Information privacy and security practices. Covered Information is defined in the Privacy decision as Customer Energy Usage Data (CEUD) obtained via Advanced Metering Infrastructure combined with other information that could reasonably be used to identify a residential customer, family, household, residence, or nonresidential customer. Covered Information does not include information provided to the CPUC pursuant to its oversight responsibilities.

PG&E engaged KPMG to conduct an independent assessment of the Company’s Covered Information privacy and security processes, controls, and practices in conjunction with general rate case proceedings.¹ This report represents the results of KPMG’s assessment.

During the period under review, the US Department of Health and Human Services declared a national health emergency due to the COVID-19 Pandemic. As a result, the State of California declared a State of Emergency and executed a stay at home order causing the majority of PG&E’s workforce to migrate to a remote working environment. PG&E adapted and adjusted several of its safeguards and processes over Covered Information in light of the new remote working environment impacting the vast majority of the workforce. KPMG’s team also adjusted its approach to delivering the assessment by using various forms of media, technology, and a virtual team infrastructure to execute this assessment 100% remotely.

¹ Independent privacy and security practices assessment is not intended to be an audit, examination, attestation, special report or agreed-upon procedures engagement as those services are defined in American Institute of Certified Public Accountants literature applicable to such engagements. Accordingly, these services will not result in the issuance of a written communication to third parties by KPMG directly reporting on financial data or internal control or expressing a conclusion, an opinion, or any other form of assurance.

Scope

The scope of KPMG's assessment was limited to systems and Lines of Business (LOBs) collecting, processing, storing, or disclosing Covered Information. The scope does not cover an assessment of PG&E's practices, procedures, and controls to safeguard employee or contractor PII, or other customer PII that is not Covered Information.

To perform the review, KPMG used an Assessment Framework comprised of multiple criteria based on various industry leading standards. We mapped the Assessment Framework criteria to the nine (9) Rules in the *Privacy Decision* and used the framework to perform the assessment of PG&E's privacy and security practices, procedures, and controls to safeguard Covered Information.

- The *Covered Information Privacy and Security Practices Assessment* was based on KPMG's review and understanding of the practices, procedures, and controls in place from **January 1, 2020 through December 31, 2020** (the Covered Period).
- The exceptions and recommendations were based on our review of policy/procedure documents, stakeholder interviews, inspection of sample communications to customers and third parties, Covered Information access reports, system security profiles, and virtual site walkthroughs.
- In typical years, KPMG would perform physical site walkthroughs to observe the physical, technical and administrative privacy and security controls implemented where Covered Information is collected, stored, and processed. However, as a result of the global pandemic, KPMG was unable to conduct physical site walkthroughs as part of the 2020 assessment. KPMG did conduct virtual site walkthroughs of a Contact Center, Billing and Processing Center, and the Data Center. KPMG's observations are limited to observations identified through such virtual site walkthroughs, stakeholder interviews, virtual screen sharing and documentation reviews.
- KPMG conducted 32 interviews with personnel from various LOBs including IT Operations, Cybersecurity, Cybersecurity Risk and Strategy, Regulatory Proceedings, Law, Corporate Security, Billing Operations, Credit Operations, Billing Exceptions, Internal Audit, Customer Fund Management, Data Center Facilities, Community Vitality, Contact Center Operations, IT Business Technology, Customer Energy Solutions, Information Security, Customer Relations, Training and Quality Compliance, PG&E Academy, Customer Policy and Operations, Third-party Risk Management, Bill Print Mail & Payment Processing, Corporate and IT Sourcing, eDiscovery and Digital Investigations, Customer Operations Risk & Compliance, Data Governance, Enterprise Operations, Customer Privacy, Customer Care, and Enterprise Records and Information Management.
- KPMG assessed the design and implementation of privacy and security controls followed by an assessment of the operating effectiveness of key implemented controls.

The nine (9) Rules noted in the *Privacy Decision* are listed below.

Rule 1	Definitions
Rule 2	Transparency (Notice)
Rule 3	Purpose Specification
Rule 4	Individual Participation (Access and Choice)
Rule 5	Data Minimization
Rule 6	Use and Disclosure Limitation
Rule 7	Data Quality and Integrity
Rule 8	Data Security
Rule 9	Accountability and Auditing

Summary of exceptions

KPMG has noted **6** Exceptions (Exceptions are areas where PG&E's program may not be fully prepared to meet compliance with the *Privacy Decision* requirements, as measured against KPMG's Assessment Framework, developed to test controls around Covered Information identified in the rules). The Exceptions are shown below along with the recommendations associated with each Exception. There was **1** Low-Risk Exception, **5** Medium-Risk Exceptions, and **0** High-Risk Exceptions. PG&E remediated **3** Medium-Risk Exceptions prior to the finalization of the assessment report. The risk rating methodology is based on the following definitions:

Risk level	Description
High	Issue poses a significant risk of data breach of Covered Information and/or a significant deviation from the <i>CPUC Privacy Decision</i> .
Medium	Inconsistent implementation of policies and procedures that may impact the ability of PG&E to protect Covered Information and/or achieve adequate alignment with the <i>CPUC Privacy Decision</i> .
Low	Procedures or practices supporting the protection of Covered Information and alignment with the <i>CPUC Privacy Decision</i> may not be formally defined or documented.

For more details associated with each Rule, see the **Rule assessment results, exceptions, and recommendations and Appendix I – Detailed assessment procedures and results**.

CPUC rule number	Risk level	Exceptions noted	KPMG recommendations
CPUC Rule 1 Definitions	-	-	N/A
CPUC Rule 2 Transparency (Notice)	-	-	N/A
CPUC Rule 3 Purpose Specification	-	-	N/A
CPUC Rule 4 Individual Participation (Access and Choice)	-	-	N/A
CPUC Rule 5 Data Minimization	-	-	N/A
CPUC Rule 6 Use and Disclosure Limitation	Medium	PG&E's vendor contracts include privacy and security provisions and the Company performs detailed vendor security assessments prior to executing contracts and sharing Covered Information with a vendor. However, we observed inconsistent privacy and security provisions in vendor contracts, which in some cases were inconsistent	PG&E should consider establishing standard contractual privacy and security provisions for suppliers who have access to Covered Information to enhance customer privacy protection and help ensure Covered Information is properly managed by suppliers.

CPUC rule number	Risk level	Exceptions noted	KPMG recommendations
		with formal regulatory requirements.	
CPUC Rule 7 Data Quality and Integrity	Medium	A comprehensive inventory of systems containing Covered Information was not maintained during the course of the Covered Period.	PG&E remediated this Exception prior to the finalization of the assessment report. PG&E has taken actions to correct this issue by updating the inventory of systems containing Covered Information.
CPUC Rule 8 Data Security	Medium	PG&E has established standards for setting up a network password. However, it was noted that the system does not ensure the password chosen meets all requirements outlined in Appendix A of the <i>System Authentication Requirements Standard</i> . The system allowed the creation of a network password, which did not meet one of the complexity requirements.	PG&E remediated this Exception prior to the finalization of the assessment report. PG&E has taken actions to correct this issue by updating the System Authentication Requirements Standard to align with technical capabilities.
	Medium	PG&E has established mechanisms to prevent the exfiltration of data and files between the virtual workstation and an external environment. However, it was noted that a user is able to map to a local printer and print files from the virtual desktop environment.	PG&E remediated this Exception prior to the finalization of the assessment report. PG&E has taken actions to correct this issue by implementing configuration changes, which prevents a user from mapping to local printers and printing from within the virtual desktop environment.
	Low	PG&E currently maintains a 30-minute session timeout for its virtual remote desktop access; however, it was possible to access the remote desktop without reinputting credentials and relaunching the virtual workspace receiver after 30 minutes of inactivity.	PG&E should update the session timeout configurations for its remote desktop access to align with account lockout requirements outlined in the PG&E <i>System Authentication Requirements Standard</i> .
CPUC Rule 9	Medium	The Annual Privacy and Security training is assigned	PG&E should consider requiring employees to

CPUC rule number	Risk level	Exceptions noted	KPMG recommendations
Accountability and Auditing		to all employees and contractors through PG&E's My Learning system annually on March 1. From March 1, the Utility allows 90 days to complete the required training. Employees and contractors who start between October 1 and November 30 receive a fixed due date of December 31. Employees and contractors commencing work with PG&E between December 1 and February 28 are not assigned the Privacy and Security training until March 1. As a result, individuals could use, process, or store Covered Information for up to 181 days (December 1 – May 31) without completing the training. In addition, an employee or contractor could start and end their work assignment between December 1 and February 28 without being required to complete the training. During the period between January 1 and February 28 (Covered Period for assessment), 7 employees and 390 contractors had started and ended employment with PG&E and were not required to complete the Privacy and Awareness training.	complete the required Privacy and Security Awareness training within 90 days from the start of employment. If it is known the employment period will start and end between December 1 and February 28, then it is recommended the employee/non-employee be required to complete the training offered in the prior year.

Project approach and methodology

KPMG approached the Assessment in three (3) phases: Assess, Validate, and Report.



- **Assess** – KPMG developed an Assessment Framework to review PG&E’s privacy and security practices based on the nine (9) Rules comprising the *Privacy Decision*. KPMG identified controls for each Rule’s requirements and performed procedures to assess the Design and Implementation and Operating Effectiveness of program policies and procedures, and to identify any noted Exceptions to those controls.

KPMG created this framework at the inception of the *Privacy Decision*, and it has been used across all the California IOUs. The framework has evolved overtime to reflect changes in the environment, market expectations and Utilities maturing programs.

KPMG worked with the PG&E Privacy team to identify relevant stakeholders, reviewed the organizational structure to identify business groups where Covered Information may reside, reviewed the current IT landscape to identify systems and applications that collect, store, or process Covered Information, and documented existing system profiles for systems and applications that collect, store and process Covered Information.

As part of its assessment, KPMG performed a variety of interviews with stakeholders representing various Lines of Business. KPMG interviewed a unique total number of **75** personnel, submitted **208** document requests, reviewed **555** documents and **27** system assessments, and performed **3** virtual site walkthroughs of critical PG&E facilities (Customer Contact Center, Data Center, and Usage and Billing Center) to observe the safeguards in place to protect Covered Information.

- **Validate** – KPMG validated draft observations throughout the Assessment phases with the PG&E Privacy team, relevant IT and business stakeholders, and PG&E leadership.
- **Report** – KPMG developed a final report providing exceptions and recommendations and incorporated PG&E’s Management Response to the validated Exceptions.

Rule assessment results, exceptions and recommendations

For each risk identified, KPMG reviewed the risk and assigned a risk rating of **High**, **Medium**, or **Low** to each Exception based on the potential impact the Exception could have as it relates to the protection of Covered Information. The risk rating methodology used the following definitions:

Risk level	Description
High	Issue poses a significant risk of data breach of Covered Information and/or a significant deviation from the <i>CPUC Privacy Decision</i> .
Medium	Inconsistent implementation of policies and procedures that may impact the ability of PG&E to protect Covered Information and/or achieve adequate alignment with the <i>CPUC Privacy Decision</i> .
Low	Procedures or practices supporting the protection of Covered Information and alignment with the <i>CPUC Privacy Decision</i> are not formally defined or documented.

KPMG notes **6** specific Exceptions, comprised of **1** Low-Risk Exception, **5** Medium-Risk Exceptions, and **0** High-Risk Exceptions. PG&E remediates **3** Medium-Risk Exceptions prior to the finalization of the assessment report. The Exceptions identify areas where PG&E's program is not fully prepared to meet requirements under the *Privacy Decision*.

The following tables provide a summary of the criteria that KPMG applied in the assessment of each of the nine (9) Rules of the *Privacy Decision*, the overall assessment results of the set of criteria evaluated, and relevant Exceptions (if any) along with level of risk, risk implication and recommendation.

Rule 2: Transparency notice

KPMG assessment procedures	KPMG assessed PG&E’s overall customer notice program focusing on: — Review of internal and customer-facing <i>Privacy Policies</i> and <i>Privacy Notice</i> that address PG&E’s practices and procedures related to the collection, processing, storage, and disclosure of Covered Information; — Interviews with PG&E personnel and review of methods and frequency for providing customers with the <i>Privacy Notice</i>; — Performance of a virtual site walkthrough at a Customer Contact Center and interviews with Customer Service Representatives to discuss interactions with customers and discussing their Covered Information.
Results summary	PG&E provides its external-facing <i>Notice of Accessing, Collecting, Storing, Using and Disclosing Energy Usage Information (Privacy Notice)</i> on its website detailing the manner in which the Company collects, stores, shares, and protects Covered Information and the methods by which customers can access their data. There is a “Privacy” link located at the bottom of PG&E’s homepage, which takes the Customer to Privacy related resources, including the <i>Privacy Notice</i>. The <i>Privacy Notice</i> includes a contact telephone number and mailing address where customers can contact PG&E with complaints, inquiries, and disputes regarding their Covered Information and PG&E’s <i>Privacy Notice</i>. PG&E offers the online <i>Privacy Notice</i> in English, Mandarin, and Spanish, representing the languages used and understood by its largest customer demographics. PG&E also provides its <i>Privacy Notice</i> to newly registered customers as part of a welcome package, and annually thereafter in a bill insert. PG&E also makes available its previous versions of the <i>Privacy Notice</i> upon request. Customers can email pgeprivacy@pge.com or contact the Contact Center to request prior versions of PG&E’s <i>Privacy Notice</i>.
Exception	No Exceptions noted
Risk level	-
Risk implication	-
Recommendation	-

Rule 3: Purpose specification

KPMG assessment procedures	KPMG assessed PG&E's specification of the purposes focusing on: — How PG&E specifies the reasons for which it collects, discloses, retains, and provides access to Covered Information; — Review of the PG&E <i>Privacy Notice</i> and other policies and procedures and interviews with stakeholders to understand the determination and specification of information and third-party categories; Examination of whether the <i>Privacy Notice</i> included a description of how customers could access and control their Covered Information collected, processed, stored, and disclosed by PG&E; — Interviews with PG&E personnel on procedures to assist customers with accessing, inquire about, or dispute their covered information.
Results summary	PG&E has documented policies and procedures outlining the acceptable purposes for which Covered Information may be collected, stored, used, and shared. These include detailed policies regarding disclosure of Covered Information for both primary and secondary purposes. In addition, the <i>Privacy Notice</i> includes ways the Customer can limit the collection, use, and storage of Covered Information and the consequences if such limitations are imposed. Per company policy, Covered Information is not disclosed for secondary purposes, without customer authorization. PG&E's <i>Privacy Notice</i> includes the categories of third parties with which PG&E may share Covered Information, and circumstances under which that information may be shared. PG&E has implemented internal policies, procedures, and standards instructing employees on determining the veracity and propriety of third-party requests for customer information, the relevant customer consent forms, and on the appropriate use of Covered Information.
Exception	No Exceptions noted
Risk level	-
Risk implication	-
Recommendation	-

Rule 4: Individual participation (Access and choice)

KPMG assessment procedures	KPMG assessed PG&E's customer-facing program focusing on: — Internal and external policies and procedures to provide customers with access and consent mechanisms related to their Covered Information; — Review of customer portals, stakeholder interviews, and virtual walkthroughs of the Customer Contact Center and other locations where PG&E Customer Service Representatives (CSRs) interact with customers with respect to their Covered Information; — Review of customer authorization forms to understand how customers can grant and revoke authorization for secondary purposes of their Covered Information; — Examination of the process in place to disclose Covered Information pursuant to legal processes and in situations of imminent threat to life or property. Test procedures included review of policies and procedures for tracking these requests and the subsequent notice provided to customers and interviews with PG&E stakeholders in relevant business functions.
Results summary	PG&E provides customers with multiple methods to access their Covered Information, including on their monthly bills, via the "My Energy" and "Your Account" features online, and through "Home Energy Reports" that allow them to review and interpret their online usage information. Customers may contact PG&E through phone, web, email, or mail with questions or concerns regarding their Covered Information, account, and monthly bills. PG&E CSRs authenticate customers and validate their account information when answering calls prior to addressing customers' questions or concerns. Internal guidelines for PG&E employees who interact with customers are in place and address how to provide customers with access to their Covered Information. PG&E has processes and procedures in place for customers to grant and revoke authorization to third parties through the use of the <i>Authorization to Receive Customer Information or Act on a Customer's Behalf (CISR)</i> form. Customer-facing policies and notices indicate PG&E may disclose Covered Information if it is necessary to provide energy services, to comply with relevant laws, to respond to subpoenas or warrants, or to provide emergency responders with pertinent information in the case of imminent threat to life or property. Per PG&E's 2020 <i>Annual Privacy Report</i>, PG&E received 341 demands to disclose Covered Information pursuant to legal process and zero requests for Covered Information due to imminent threat to life or property.
Exception	No Exceptions noted
Risk level	-
Risk implication	-
Recommendation	-

Rule 5: Data minimization

KPMG assessment procedures	KPMG assessed PG&E's adoption of Data Minimization principles in the collection, use, and disclosure of Covered Information focusing on: — Corporate and department-specific policies and procedures to understand how Covered Information is segregated from other systems; — How user access to Covered Information is limited based on business need; — How records and assets are retained for only as long as reasonably necessary; — Proper disposal of records upon their eligibility for disposition; — How Data Minimization principles were adopted as part of third-party disclosure practices; — Performance of virtual site walkthroughs at the Customer Contact Center and interviews with Customer Service Representatives to understand how Data Minimization is implemented in the Contact Centers and in a remote working environment.
Results summary	PG&E has implemented the Data Minimization principle as a foundational component to its overall privacy framework, and has documented policies and procedures limiting the amount of information collected, stored, and retained; the number and level of employees who have access to Covered Information; and the categories of third parties with whom it is shared. PG&E enforces the same Data Minimization protocols within the Contact Centers as they do for employees working remotely. A supplemental <i>Code of Conduct</i> related to remote work and safeguarding customer information was required to be electronically signed by employees. PG&E reinforces Data Minimization through various trainings and employee compliance with relevant policies and procedures is routinely reviewed.
Exception	No Exceptions noted.
Risk level	-
Risk implication	-
Recommendation	-

Rule 6: Use and disclosure limitation

KPMG assessment procedures	KPMG assessed PG&E's Third-Party Management Program focusing on: — Review of processes in place for disclosure of Covered Information to third parties. "Third party" is defined to include suppliers and contractors; — Review of procedures and forms for customers to authorize and revoke a third party to receive Covered Information on behalf of the customer; — Examination of third-party management policies and procedures and interview of stakeholders to understand how PG&E implements practices and procedures based on the categories of third parties; — Review of the third-party contract management process including onboarding, contract compliance reviews, and contract termination; — Review third-party (suppliers, vendors, contractors and consultants) risk management documentation; — Review of data transmission protocols and ongoing monitoring of third parties for compliance with PG&E policies and contractual provisions.
Results summary	PG&E has processes in place to allow customers to share their Covered Information with third parties. PG&E has formal internal procedures to manage customer requests of disclosure to third parties, which include forms for explicit customer authorization and forms to revoke such authorization. Prior to providing services to PG&E, all third parties must have a written formal agreement and must undergo annual third-party security reviews. PG&E has internal third-party management policies and informs third parties about data privacy requirements. Third-party vendors are contractually obligated per their contract clauses to maintain the privacy of the information shared.
Exception	PG&E's vendor contracts include privacy and security provisions and the Company performs detailed vendor security assessments prior to executing contracts and sharing Covered Information with a vendor. However, we observed inconsistent privacy and security provisions in vendor contracts, which in some cases were inconsistent with formal regulatory requirements.
Risk level	Medium
Risk implication	Third-party vendors with Covered Information access may have safeguards to protect customer privacy at levels less protective than those under which PG&E operates.
Recommendation	PG&E should consider reviewing all third-party contracts involving the sharing of Covered Information and ensure the contracts include the required standard language to enhance customer privacy protection and help ensure Covered Information is properly managed by suppliers.

Rule 7: Data quality and integrity

KPMG assessment procedures	KPMG assessed PG&E's data validation methods and procedures focusing on: — Review of how PG&E validates the quality and integrity of Covered Information; — Examination of the Advanced Meter systems and infrastructure to understand how usage data is managed and reconciled; — Review of policies and procedures and interviews with stakeholders to understand how PG&E provides customers with the opportunity to modify or remove other data elements collected by the Company.
Results summary	PG&E has policies in place that address the confirmation, validation, and relevance of customer information. The <i>Privacy Notice</i> provides customers with details to contact the company by phone, email or mail should they need to view and update their information. In addition, call center personnel authenticate and validate customer account information when answering a call. Customer Service Representatives can assist Customers with updating their information and also inform the Customers of how to self-service their account information online. PG&E's <i>Privacy Notice</i> and <i>User Account Terms and Conditions</i> indicates it is the customers' responsibility to ensure their personal information is updated and accurate. System checks and manual processes are in place to validate energy usage reads and perform edits to help ensure completeness and accuracy of usage data prior to billing the customer.
Exception	A comprehensive inventory of systems containing Covered Information was not maintained during the course of the Covered Period.
Risk level	Medium
Risk implication	PG&E may lack visibility into which systems contain Covered Information and may not apply required controls that can result in an adverse impact to the quality and safeguarding of Covered Information.
Recommendation	Not Applicable. PG&E remediated this Exception prior to the finalization of the assessment report. PG&E has taken actions to correct this issue by updating the inventory of systems containing Covered Information.

Rule 8: Data security

KPMG assessment procedures	KPMG assessed PG&E's physical and Cybersecurity measures to protect Covered Information focusing on: — Review of Cybersecurity policies, procedures, and measures related to: Endpoint Security, the Network environment, Firewalls, Network Access Control, Mobile Security, Patch Management, Vulnerability Management, Business Continuity, System Change Control, Privileged Access, Third-party Access, and Data Classification; — Performance of virtual walkthroughs of critical PG&E locations focusing on the physical and technical security of Covered Information at these key areas: Contact Center, Billing and Processing Center, and the Data Center. — Review a sample of in-scope systems for system configuration requirements and system settings related to: System Access, Access Management, Logging and Monitoring of changes to customer data, and Masking of sensitive data in production and development environments; — Review of PG&E's Emergency Response Plan/Breach Management Program and interviews of stakeholders who are responsible and/or accountable in the response to a potential incident involving Covered Information, including communications to regulators and impacted customers; — Examination of evidence of tools deployed in the environment to detect and analyze potential threats to Covered Information.
Results summary	PG&E has established a Cybersecurity and Physical Security Program and organization that are responsible for the design and implementation of physical and logical information security controls to protect Covered Information. These programs continue to mature by adopting new security frameworks and technology capabilities. Formal policies and procedures have been established and implemented that address specific administrative, physical and technical controls to protect Covered Information. Monitoring procedures are in place to detect and address non-compliance with policies and procedures. Various technical controls have been implemented to prevent and detect network security breaches and unauthorized access to systems containing Covered Information. A process is also in place to report and track potential security incidents to help ensure they are resolved and measures are implemented to prevent similar events from occurring in the future.
Exception 1	Current PG&E system authentication requirements for setting up a network password do not ensure that the password chosen meets all requirements outlined in the Appendix A of the <i>System Authentication Requirements Standard</i>. A KPMG contractor was able to create a network password, which did not meet one of the complexity requirements.
Risk level	Medium
Risk implication	Password requirements with lower complexity may leave individual and system accounts susceptible to compromise.
Recommendation	Not Applicable.

	PG&E remediated this Exception prior to the finalization of the assessment report. PG&E has taken actions to correct this issue by updating the <i>System Authentication Requirements Standard</i> to align with technical capabilities.
Exception 2	Although mechanisms are in place to prevent the exfiltration of data and files between remote the virtual desktop environment and an external environment, a user is able to map to a local printer and print files from within the virtual desktop environment.
Risk level	Medium
Risk implication	Printing documents from a local unmanaged printer can increase the risk of the inadvertent or malicious disclosure of Covered Information. This risk is heightened in an expanded remote work environment.
Recommendation	Not Applicable. PG&E remediated this Exception prior to the finalization of the assessment report. PG&E has taken actions to correct this issue by implementing configuration changes, which prevents a user from mapping to local printer and print from within the virtual desktop environment.
Exception 3	Although PG&E currently maintains a 30-minute session timeout for its remote desktop access, it was possible to access the remote desktop without reinputting credentials and relaunching the VDI workspace receiver after 30 minutes of inactivity.
Risk level	Low
Risk implication	In the current working environment where the majority of the workforce is remote, the lack of remote desktop session termination can expose the risk of unauthorized users reusing session identifiers to gain access to the PG&E environment.
Recommendation	PG&E should update the session timeout configurations for its remote desktop access to align with account lockout requirements outlined in the PG&E <i>System Authentication Requirements Standard</i> .

Rule 9: Accountability and auditing

KPMG assessment procedures	KPMG assessed PG&E’s overall Customer Data Privacy and Cybersecurity programs, focusing on: — Review of documentation supporting each program, as well as PG&E’s communication of these policies to both employees and contractors; — Review of executive support and sponsorship of Customer Data Privacy and Cybersecurity, including the individuals and roles responsible and accountable for Customer Data Privacy and Cybersecurity throughout the enterprise; — Interviews with members of PG&E Executive Management to understand leadership’s views on customer data protection; — Review of the process to receive, track, and resolve customer complaints, disputes, and inquiries related to the protection of Covered Information. Test procedures included a review of internal procedures, interviews with stakeholders involved in the Complaints process, and a virtual walkthrough of the Customer Contact Center; — Examination of employee training and awareness associated with the protection of Covered Information. This assessment included a review of enterprise-wide and targeted training materials provided to PG&E employees and third-party contractors collecting, handling, storing, or transmitting Covered Information. Additionally, KPMG observed training compliance maintained for the privacy training and attestations provided by third parties regarding compliance with PG&E training requirements; — Review of internal audits performed during the covered period that involved a review of PG&E’s Covered Information practices and safeguards.
Results summary	PG&E has developed Company and department policies addressing the proper safeguarding of Covered Information. The organization is supported by a mature Customer Privacy Program, including a Privacy Committee that provides executive and management support, oversight, and visibility to reporting. We also noted that a process exists to respond to complaints and inquiries levied by customers related to customer privacy. A Company-wide privacy and security training has been implemented and a targeted deep dive training is provided to employees and contractors that have access to Covered Information.
Exception	Employees and contractors commencing work with PG&E between December 1 and February 28 are not assigned the Privacy and Security training until March 1, at which time the Utility allows 90 days to complete this training.
Risk level	Medium
Risk implication	Individuals could use, process, or store Covered Information for up to 181 days (December 1 – May 31) without completing the training. In addition, an employee or contractor could start and end their work assignment between December 1 and February 28 without being required to complete the training.

Recommendation	PG&E should consider requiring employees to complete the required Privacy and Security Awareness training within 90 days from the start of employment. If it is known the employment period will start and end between December 1 and February 28, then it is recommended the employee/non-employee be required to complete the training offered in the prior year.

PG&E's Management Response to CPUC Covered Information Privacy and Security Assessment Report



Pacific Gas and Electric Company
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 San Francisco, CA 94177-1490

PG&E Management Response

Protecting customer information is a top priority for PG&E. It is PG&E's policy to treat personal information and data about customers as confidential, consistent with all legal and regulatory requirements, including those that the California Public Utilities Commission (CPUC) has established.

PG&E values the insights from KPMG's recent independent audit of the Company's privacy and security practices, and the professional manner in which KPMG performed the audit. PG&E already has begun, and will continue to, integrate these insights into its work, as implementation of these external insights will only serve to improve the effectiveness and maturity of PG&E's program. To that end, PG&E appreciates KPMG's recognition of the maturity of the Company's Customer Privacy and Security Programs.

PG&E's response to KPMG's recommendations are summarized below.

Rule 6

KPMG Recommendation #1: PG&E should consider reviewing all third-party contracts involving the sharing of Covered Information and ensure the contracts include the required standard language to enhance customer privacy protection and help ensure Covered Information is properly managed by suppliers.

PG&E agrees with the KPMG finding regarding the need to continue to review third-party contracts to ensure that the contracts contain PG&E's standardized privacy and information security terms and conditions, in compliance with regulatory requirements applicable to Covered Information. PG&E periodically reviews existing contracts when they are amended or extended to ensure compliance with standardized terms and conditions, and the one contract cited by KPMG in its sampling of PG&E contracts has been updated to ensure compliance. The root cause of the non-compliance identified by KPMG was completion of a project nearly ten years ago that involved initial access to Covered Information but for which ongoing maintenance of the contract did not require such access by the contractor.

Rule 8

KPMG Recommendation #1: PG&E should update the session timeout configurations for its remote desktop access to align with account lockout requirements outlined in the PG&E System Authentication Requirements Standard.

PG&E agrees with the issue and is coordinating with vendor alternatives to address it. PG&E will continue to work on a solution to address this issue with minimum business disruption and user impact.

Rule 9

KPMG Recommendation #1: PG&E should consider requiring employees to complete the required Privacy and Security Awareness training within 90 days from the start of employment. If it is known the employment period will start and end between December 1 and February 28, then it is recommended the employee/non-employee be required to complete the training offered in the prior year.

PG&E is continually working to reinforce its training process to ensure that employees understand their obligation to protect Covered Information. Not all individuals that perform work for PG&E have access to Covered Information.



Additionally, regular communications and reminders about the obligation to protect data are provided to employees and non-employee workers through PG&E's daily employee newsletter and other vehicles.

In addition, all individuals employed by PG&E and all non-employee workers performing work for PG&E are required to sign an NDA upon hiring that outlines their obligation to protect confidential information, which includes Covered Information. This is designed to ensure appropriate communication of privacy expectations for Covered Information from the first day of employment.

Martin Strasburger Digitally signed by Martin
Strasburger
Date: 2021.05.27 13:27:45 -07'00'

Martin Strasburger -- Sr. Director, Cybersecurity

Emily Behr Digitally signed by Emily
Behr
Date: 2021.05.28 10:21:04
-07'00'

Emily Behr -- Director, Risk, Compliance, Audit & Privacy

Appendix I – Detailed assessment procedures and results

CPUC RULE 2 – Transparency (Notice)

Overall assessment result		No exception noted
CPUC Rule 2	Rule description	When provided: Covered entities shall provide written notice when confirming a new customer account and at least once a year shall inform customers how they may obtain a copy of the covered entity's notice regarding the accessing, collection, storage, use, and disclosure of Covered Information and shall provide a conspicuous link to the notice on the home page of their website, and shall include a link to their notice in all electronic correspondence to customers.
b		

Assessment procedures	Assessment test results	Exceptions
1. Assess whether PG&E has documented policies addressing the provision of notice to customers of PG&E's data collection and handling techniques.	1. a. Reviewed Gas and Electric Rule 27 <i>Privacy and Security Protections of Energy Usage Data Tariff Application Guide</i> and noted that it provides guidance to PG&E employees on: - how to use and protect CEUD, - an explanation of primary and secondary uses, - how PG&E must only collect, store, use, or disclose only as much CEUD as necessary or authorized by the CPUC to meet specific operational or business needs, - how notice is provided to customers, and what the notice must include, and - how customers can control their energy usage data. 1. b. Reviewed the <i>Customer Privacy Program Charter</i> and noted that the PG&E Privacy Program is based on the Fair Information Practices that apply safeguards to collection and use of Covered Information. This document also addresses all responsibilities of the program members and documentation requirements, including: "Evaluating and continually improving PG&E's privacy policies, standards, and procedures, including annual review of PG&E <i>Privacy Policy</i>." 1. c. Viewed links to the <i>Privacy Notice</i> and <i>Privacy Policy</i> on PG&E's website. PG&E's <i>Privacy Notice</i> informs customers why PG&E collects energy usage information, how long PG&E retains their energy usage information, when PG&E shares energy usage information, how to view their energy usage information online, and how to view the <i>Privacy Notice</i> online. 1. d. Reviewed <i>New Customer Welcome Letter</i> and noted that the letter includes the web address of PG&E's <i>Privacy Notice</i>, as well as information on how to obtain a copy of the <i>Privacy Notice</i>. 1. e. Visited Company website and noted that the home page contains a link to PG&E's <i>Privacy Notice</i>.	

Assessment procedures	Assessment test results	Exceptions
	1. f. Met with Director, Risk, Compliance, Audit & Privacy, and was informed that when there are any changes to the <i>Privacy Notice</i>, the customers are informed with a billing insert. There were no updates to Rule 27 within the covered period; however, the notice was updated for CCPA regulations. A billing insert was sent out in January 2020 notifying customers of the changes. 1. g. Observed a billing insert that was sent to customers in January 2020 notifying them of changes to the <i>Privacy Notice</i>. 1. h. Reviewed the <i>Notice of Accessing, Collecting, Storing, Using and Disclosing Energy Usage Information (Privacy Notice)</i> on the PG&E website and noted that it was last updated on January 1, 2020 and last reviewed June 9, 2020.	
2. Assess whether a procedure exists to assess whether new customers receive notice of the Company's privacy policy upon registration and annually thereafter. In addition, a procedure exists to track prior iterations of the privacy policy.	2. a. Reviewed PG&E's <i>Privacy Notice</i> and noted that the document provides customers with contact information to request a current or prior version of the <i>Privacy Notice</i>. 2. b. Reviewed PG&E's <i>Privacy Policy</i> and noted that the Utility will review it when significant changes occur (at a minimum every 12 months). In addition, it notes that PG&E will notify its customers of material changes through updates on PG&E's website and also instructions for how to obtain prior versions. The Policy also states: "We will also notify you annually in a bill insert to revisit the most updated version of this Privacy Policy on our website." 2. c. Reviewed <i>New Customer Welcome Letter</i> template and noted that it contains the URL at which customers can find the <i>Privacy Notice</i> online, which contains a telephone number, email address, and postal address customers can use to request a hard copy of the <i>Privacy Policy</i>. 2. d. Reviewed the January 2020 bill insert titled "We've updated our privacy policy" and noted it informed the customers of the update made regarding CCPA regulations. The notice also included the web address of PG&E's <i>Privacy Policy</i>, as well as contact information to request a copy of the updated policy.	

Assessment procedures	Assessment test results	Exceptions
3. Assess whether PG&E provides notice to customers on an annual basis and when signing up new customers as required by the CPUC regulation.	2. e. Met with members of PG&E's Customer Privacy Program and learned that customers receive notice of the Company's <i>Privacy Policy</i> upon registration, annually, and as needed if any changes or updates are made to the policy. The <i>Privacy Notice</i> is also available on PG&E's website.	
	2. f. Emailed pgeprivacy@pge.com on 1/1/2021 and asked for prior versions of the <i>Privacy Notice</i> that were in effect during the period between 2016 through 2019. Received an email response from the PG&E Privacy Team on 1/20/2021 containing the 2016, 2017, 2018, and 2019 versions of the notice.	
	3. a. Reviewed a copy of the <i>New Customer Welcome Cover Letter</i> and noted that it contains the URL at which customers can find the <i>Privacy Notice</i> online, which contains a telephone number and postal address customers can use to request a hard copy of the <i>Privacy Notice</i> .	
	3. b. Reviewed the 2020 August annual bill insert and noted that it contains the web address of PG&E's <i>Privacy Policy</i> , as well as contact information to request a copy of the current or prior policy versions and to obtain answers to any privacy questions, concerns, or complaints.	
	3. c. Reviewed a January 2020 bill insert and noted that the customers were informed that PG&E made updates to the <i>Privacy Policy</i> . This insert also provided the URL as well as a telephone number where customers can access or request the updated <i>Privacy Policy</i> .	

CPUC Rule 2 c(1)-(2)	Rule description	When provided: The notice shall be labeled Notice of Accessing, Collecting, Storing, Using and Disclosing Energy Usage Information (1) be written in easily understandable language, and (2) be no longer than is necessary to convey the requisite information.	
		Assessment test results	Exceptions
1. Review PG&E's methods for providing customers notice about their privacy and accessing the <i>Privacy Notice</i> .		1.a. See CPUC Rule 2b for test results.	
		1.b. Visited Company website and noted that the word "Privacy" appears bolded and easy to find at the bottom of the homepage; clicking on it brings the user to an explanation of how PG&E keeps customers personal information safe and a link to the <i>Privacy Notice</i> .	
		1.c. Reviewed <i>New Customer Welcome Letter</i> and the <i>Annual Bill Insert</i> sent to customers and noted that they contain the URL at which customers can find the <i>Privacy Notice</i> online.	
		1.d. Met with members of PG&E's Customer Privacy Program and learned that customers receive notice of the Company's <i>Privacy Policy</i> upon registration, annually, and as needed if any changes or updates are made to the policy. The <i>Privacy Notice</i> is also available on PG&E's website.	
2. Assess whether a procedure exists to review the readability of the <i>Privacy Notice</i> and make updates based on customer feedback related to readability and content.		2.a. Reviewed PG&E's <i>Privacy Notice</i> and noted that it includes contact information where customers can provide comments, questions, or concerns regarding the <i>Privacy Notice</i> . The contact information includes an email address (pgeprivacy@pge.com), a mailing address directed to Privacy Management, a Residential Customers phone number (1-800-743-5000), and Business Customers phone number (1-800-468-4743).	
3. Assess whether PG&E's <i>Privacy Notice</i> is written in an easy-to-understand language.		3.a. Performed a Flesch-Kincaid reading level test on the <i>Privacy Policy</i> and noted that it was written at a college-level Flesch-Kincaid reading level (15th grade).	
		3.a. Performed a Flesch-Kincaid reading level test on the <i>Privacy Notice</i> and noted that it was written at a college-level Flesch-Kincaid reading level (14th grade).	
		3.b. Noted that the <i>Privacy Policy</i> and <i>Privacy Notice</i> are available in English, Spanish, and Mandarin and contact information is available to customers for comments, questions, or concerns regarding the privacy policy.	

CPUC Rule 2	Rule description	Content: The notice and the posted privacy policy shall state clearly— (1) the identity of the covered entity, (2) the effective date of the notice or posted privacy policy, (3) the covered entity's process for altering the notice or posted privacy policy, including how the customer will be informed of any alterations, and where prior versions will be made available to customers, and (4) the title and contact information, including email address, postal address, and telephone number, of an official at the covered entity who can assist the customer with privacy questions, concerns, or complaints regarding the collection, storage, use, or distribution of Covered Information.	
Assessment procedures	Assessment test results	Exceptions	
1. Understand the procedures in place to identify covered entities and assess whether the effective date is indicated in the relevant documentation.	1.a. Reviewed the <i>Privacy Notice</i> and the <i>Privacy Notice</i> online and noted that they both include an effective date, both effective dates are January 1, 2020. Reviewed the prior version of the <i>Privacy Notice</i> and noted that it includes the effective date of January 1, 2019. Both the current and prior version of the <i>Privacy Notice</i> include language indicating that Pacific Gas & Electric Company is covered by the notice. 1.b. Reviewed the <i>Privacy Notice</i> online and noted that it has a section informing customers how to access past and current privacy policies. Customers may call 1-800-743-5000, mail their request to the address provided for Privacy Management, or email pgeprivacy@pge.com. 1.c. Reviewed PG&E's <i>Rule 27 Tariff Application Guide</i>, as well as the separate <i>Electric and Gas Rule 27</i> documents and noted it includes the definition of a 'covered entity' as: - PG&E and its contractors and vendors, - Any third party who accesses, collects, stores, uses or discloses Covered Information pursuant to an order of the Commission, unless specifically exempted, who obtains this information from PG&E, or - Any third party, when authorized by the customer, that accesses, collects, stores, uses, or discloses Covered Information relating to 11 or more customers who obtains this information from PG&E.		

Assessment procedures	Assessment test results	Exceptions
2. Understand how the regulatory requirements, management review and approval process works, including potential alterations of the privacy policies.	2.a. Reviewed the <i>Annual Review of Privacy Documents Procedure</i> and noted that it details the process for revising PG&E's <i>Privacy Policy</i> and <i>Privacy Notice</i>, including what circumstances trigger revisions, the stakeholders involved, deadlines for submissions, and guidelines for creating and distributing drafts of revisions. 2.b. Met with Chief Counsel, Manager Compliance and Risk, and Manager Regulatory Proceedings, and learned that on a monthly basis, a report of CPUC regulatory requirements is extracted from PG&E's web application that tracks regulatory compliance requirements. This report is then reviewed and the existing requirements inventory is updated as needed. If additional requirements are identified, the appropriate stakeholder will be assigned ownership and it is added to the controls testing template to ensure compliance. In addition, the Regulatory Affairs Team would coordinate with the Privacy Team for their input and assistance with implementation.	
3. Inspect original and revision dates of policies to assess if actual updates/edits are made before approvals.	3.a. Met with members of PG&E's Customer Privacy Program, and was informed that PG&E previously updated the <i>Privacy Notice</i> in January 2020 and completed the annual review in June 2020, in advance of providing the annual notice requirement to customers in the August 2020 billing insert. 3.b. Observed email communication from June 9, 2020 evidencing the review and approval of the <i>Privacy Notice</i> by the Director of Risk Compliance and Privacy. The reviewed <i>Privacy Notice</i> was posted on June 9, 2020. 3.c. Observed a redlined copy with edits and comments of the most current <i>Privacy Notice</i>, as well as communications, updates, and approvals prior to posting.	
4. Assess how PG&E informs customers of any alterations to the Privacy Notice and where prior versions will be made available to customers.	4.a. Reviewed the <i>Privacy Notice</i> online and noted that it informs customers that changes to the Notice will be made as necessary and when required by the CPUC, and that material changes to the Notice will be communicated on PG&E's website, pge.com. In addition, the customer will be notified annually in a bill insert to revisit the most updated version of the Notice on PG&E's website. The website also provides customers with a telephone number (800) 743- 5000 for Residential Customers), a link to click for Business Customers, an email address	

Assessment procedures	Assessment test results	Exceptions
	(pgeprivacy@pge.com), and a mailing address where individuals can request a current and prior version of the <i>Privacy Notice</i>. 4.b. See CPUC Rule 2b test results.	
5. Observe whether PG&E's <i>Privacy Notice</i> identifies the title and contact information (including email address, postal address, and telephone number) of an official at PG&E, who can assist the customer with potential privacy questions, concerns, or complaints.	5.a. Reviewed PG&E's <i>Privacy Notice</i> and the online <i>Privacy Notice</i> and noted that they include contact information where customers can provide comments and concerns regarding the <i>Privacy Notice</i> . The contact information includes an email address (pgeprivacy@pge.com), a mailing address directed to Privacy Management, a Residential Customers phone number (1-800-743-5000) and Business Customers phone number (1-800-468-4743).	
6. Assess whether a specific person or group within PG&E is responsible or accountable for privacy and security policy development, implementation, monitoring, enforcing, and updating.	6.a. Reviewed the <i>Corporation Policy: GOV-08 Privacy Policy</i> and noted that the Customer Privacy Officer is ultimately responsible for implementing and monitoring compliance with the <i>Privacy Policy</i>. The Customer Privacy Officer also develops standards and procedures that implement the <i>Privacy Policy</i>. PG&E administers this Policy through its Privacy Program, which is overseen by the Chief Privacy Officer. The principal tenets of the Privacy Program include: - Ensuring PG&E employees and non-employee workers are responsible for the proper management of personal and/or sensitive information they create, receive, manage, retain, dispose, and destroy while performing work for PG&E - Providing enterprise-wide oversight through a centralized management and governance structure - Communicating written guidance regarding PG&E's processes and responsibilities - Implementing reasonable administrative, technical, and physical safeguards and controls to protect personal or sensitive information - Identifying and mitigating risk related to data losses	

Assessment procedures	Assessment test results	Exceptions
	- Training employees on compliance with PG&E's privacy standards and how to mitigate the risk of data loss - Ensuring compliance with CPUC rules and other legal and contractual requirements - Informing customers regarding PG&E's <i>Privacy Policy</i> - Coordinating customer privacy data loss investigations and data breach recovery activities 6.b. Reviewed the <i>Privacy Program Charter</i> and noted that the Privacy Officer has ultimate authority and responsibility for the program; however, the Officer may designate a Director-level or higher individual to oversee the day-to-day operations of the program. 6.c. Reviewed documentation associated with the Privacy Steering Committee and noted that it outlines the Committee's responsibilities, including the following: - Review, evaluate, and recommend changes to all PG&E strategies, policies, practices, and procedures associated with PG&E's commitment to personal data privacy - Advise on, recommend and implement policies and strategies in support of the Privacy Program, including practices to address identified privacy issues and meet PG&E's legal and regulatory obligations related to privacy - Oversee management and monitoring of privacy-related activities in their line of business (LOB), including identifying areas of potential privacy risk 6.d. Met with Chief Counsel, Manager Compliance and Risk, and Manager Regulatory Proceedings, and learned on a monthly basis, a report of CPUC regulatory requirements is extracted from PG&E's web application that tracks regulatory compliance requirements. This report is reviewed and the existing requirements inventory is updated as needed. If additional requirements are identified, the appropriate stakeholder will be assigned ownership and it is added to the controls testing template to ensure compliance.	

CPUC RULE 3 – Purpose specification

Overall assessment result		No exceptions noted.
CPUC Rule 3	Rule description	Categories of information: (1) Each category of Covered Information collected, used, stored, or disclosed by the covered entity, and, for each category of Covered Information, the reasonably specific purposes for which it will be collected, stored, used, or disclosed, (2) each category of Covered Information that is disclosed to third parties, and, for each such category, (i) the purposes for which it is disclosed, and (ii) the categories of third parties to which it is disclosed, and (3) the identities of those third parties to whom data is disclosed for Secondary Purposes, and the Secondary Purposes for which the information is disclosed.
a(1)-(3)		
Assessment procedures		Assessment test results
Exceptions		
1. Assess whether PG&E's <i>Privacy Notice</i> documents the (1) categories and purposes of Covered Information collected, used, stored, or disclosed, (2) each category of Covered Information that is disclosed to third parties and purpose of disclosure, and (3) the identities of those third parties with whom Covered Information is shared for Secondary Purposes.	1.a. Reviewed the <i>Privacy Notice</i> and noted it provides the following information: - The kinds of information that will be collected from and about customers - How that information will be collected, used, and protected - In what cases customer information will be disclosed to third parties - To whom customer information will be potentially disclosed in the outlined circumstances (e.g. subpoena, emergency responders, as ordered by CPUC or as required by law)	
2. Assess whether PG&E tracks the categories of agents, contractors and other third parties to which they disclose Covered Information for a primary purpose.	2.a. Reviewed PG&E's <i>Gas and Electric Rule 27 Privacy and Security Protections of Energy Usage Data</i> and noted that the document provides the definition of primary uses of CEUD. - Providing electric or gas service to a customer; - Billing for the customer's gas or electric usage; - Operating our gas and electric system pursuant to all applicable rules and regulations;	

Assessment procedures	Assessment test results	Exceptions
	- Providing services authorized by the CPUC or required by state or federal law; or - Planning, implementing, or evaluating demand response, energy management, or energy efficiency programs under contract to PG&E, the CPUC, or as part of a CPUC-authorized program conducted by a governmental entity under CPUC supervision. 2.b. Reviewed the <i>Annual Privacy Report Procedure</i> and noted that the third-party security review team is responsible for tracking categories of agents, contractors and other third parties to which PG&E discloses Covered Information. 2.c. Reviewed <i>Third-party Services Management Standard</i> and noted that the Third-party Security and Risk Management organization is responsible for tracking third parties and managing annual risk assessments for the third parties. 2.d. Met with the Third-party Security, Cybersecurity Risk Management, and Vendor Risk Management teams, and was informed that PG&E has a process in place to assign third parties into tiers from 1 (highest risk) to 4 (lowest risk). This process also tracks whether suppliers have access to Covered Information through completion of questionnaires filled out by the vendor and the corresponding LOB. In addition, we learned that the Third-party Security Reviews are required to be renewed annually. 2.e. Reviewed the <i>2020 CEUD Vendor Listing</i> document and noted that 94 vendors under authorized PG&E contracts were identified as third parties with access to Covered Information. KPMG confirmed this information is consistent with the number of vendors identified in the <i>2020 Annual Privacy Report</i> submitted to the CPUC. 2.f. Met with Senior Manager, Community Vitality, and noted that PG&E enters into contracts with Energy Service Providers (ESPs), Community Choice Aggregators (CCAs), and Core Transport Agents (CTAs), who have access to Covered Information and provide energy to PG&E customers. Each third party must undergo an onboarding process with PG&E and enter into a service agreement. Once PG&E and the third party have a signed service agreement, the third party must use the agreement in order to register with the CPUC. We also noted ESPs,	

Assessment procedures	Assessment test results	Exceptions
	CCAs, and CTAs have additional requirements from the CPUC and their respective jurisdictions, which aim to improve consumer protection. The CPUC largely regulates the data privacy rules of the third-party service vendors.	
3. Assess whether a procedure exists to assess whether new customers receive notice of PG&E's reasons for collecting, using, storing, or disclosing Covered Information.	3.a. See CPUC Rule 2b(1) test results.	
4. Assess whether PG&E effectively monitors compliance with its collection, use, storage, and disclosure practices.	4.a. Reviewed PG&E's <i>Customer Privacy Program Charter</i> and noted that monitoring and enforcement of privacy policies and procedures are components of the Customer Privacy Program. 4.b. Met with Chief Counsel, and Compliance Manager, and was informed that the Compliance Team conducts a risk-based approach to test controls over Rule 27 requirements on a quarterly basis. An enhancement was made in Q3 of 2020 and a job aide/template was created that captures the industry standards for each type of test. The main focus of this process is to ensure the controls are designed in a way to ensure they address the four assertions, Completeness, Accuracy, Validity, and Restricted Access. 4.c. Reviewed documentation associated with Privacy Internal Audits conducted in 2020 and noted that audits were conducted to help ensure compliance with rules regarding the release of customer information to third parties. 4.d. Met with Quality Assurance Supervisor for the Contact Centers and was informed an external QA team evaluates three random calls per employee every month to ensure compliance.	

Assessment procedures	Assessment test results	Exceptions
	4.e. Observed the <i>Customer Service Representative Quality Assurance Non-compliance Log</i> and noted four instances of Rule 27 non-compliance. In each instance, the non-compliance was investigated and discussed with the employee to avoid future instances. These non-compliance situations were also reported and escalated to management for tracking and monitoring purposes. 4.f. Reviewed the <i>2020 Privacy Test Plan and Results</i> and noted that Rule 27 related controls were tested in Q4 of 2020.	

CPUC Rule 3	Rule description	Retention time:	
		The notice required under section 2 shall provide— The approximate period of time that Covered Information will be retained by the covered entity;	
b			
Assessment procedures		Assessment test results	Exceptions
1. Assess whether PG&E's <i>Privacy Notice</i> addresses the retention of Covered Information.		1.a. Reviewed the <i>Privacy Notice</i> and noted that retention of Covered Information is addressed. PG&E's policy is to keep information only as long as is necessary to provide utility services, according to legal requirements or recommendations (which is typically seven years), or as required by law.	

CPUC Rule 3 c(1)	Rule description	Customer limitation: The notice required under section 2 shall provide a description of (1) the means by which customers may view, inquire about, or dispute their Covered Information	
Assessment procedures	Assessment test results	Exceptions	
1. Assess whether PG&E's <i>Privacy Notice</i> addresses customers' ability to view, inquire, or dispute their Covered Information or other PII.	1.a. Reviewed the <i>Privacy Notice</i> and noted that it identifies how customers may contact PG&E with questions and to find out how they can view, dispute, or authorize and decline access to their disclosed information. The Notice also states that PG&E relies on the customers to provide complete and accurate data. If the customers feel that their information is inaccurate or outdated, they are encouraged to contact PG&E to correct the information by calling 1-800-743-5000 (Residential Customers) or 1-800-468-4743 (Business Customers) or by signing into the customer's online account at pge.com to edit their profile. 1.b. Reviewed PG&E's August 2020 bill insert to customers, which includes a link (pge.com/privacy) to the <i>Notice of Accessing, Collecting, Storing, Using, and Disclosing Energy Usage Information</i> and noted PG&E provides customers with the option to "request a current or prior version of [PG&E's] privacy policy, or contact PG&E's Customer Privacy Management to obtain answers to any privacy questions, concerns, or complaints..." by contacting PG&E at: - Telephone: 1-800-743-5000 - E-mail: pgeprivacy@pge.com - U.S. Mail: PG&E Residential and Business Customer Service, Correspondence Management Center, Attention: Customer Privacy Management P.O. Box 997310, Sacramento, CA 95899-7310	1.c. Reviewed <i>New Customer Welcome Letter</i> and noted that the letter discloses the following means to view, inquire about or dispute their Covered Information: - Customers can manage their energy and billing information online through the "My Energy" online accounts;	

Assessment procedures	Assessment test results	Exceptions
	- Questions on how PG&E protects customer privacy can be answered by visiting the privacy website, www.pge.com/Privacy, which contains PG&E's <i>Notice of Accessing, Collecting, Storing, Using, and Disclosing Energy Usage Information</i>; - Customers can also contact PG&E via the Customer Service Line at 1-800-743-5000 or visit local PG&E offices (pge.com/local offices to find an office). 1.d. Reviewed a sample customer bill and noted that it provides the customer a phone number (1-800-743-5000) for inquiries regarding their bills and account management. The customer bill also states if the customer is not satisfied with PG&E's response, then the customer can contact the CPUC at 1-800-649-7570 or by visiting www.cpuc.ca.gov/complaints/. 1.e. Met with Supervisors from Quality Assurance, Operations, and Contact Center Operations, and was informed that there are processes in place for customers to inquire and dispute their Covered Information. CSRs handle general disputes, complaints, and inquiries. If the CSR is unable to assist the customer, then the call will be escalated to a Senior Service Representative. 1.f. Met with a sample of CSRs, which included CSRs located in the Contact Centers, as well as remote workers. KPMG noted these CSRs represent various levels and different specializations CSRs may have to assist various types of customers. KPMG learned that if a customer has a complaint, CSRs can usually resolve the issue while on the phone with the customer; however, if they are unable to, then the complaint would be routed to the Senior Service Representative. If the customer is calling to report a data loss event or a data breach, the CSR would report it to the Privacy team utilizing the data breach form online. 1.g. Reviewed the <i>Customer Relations Processes - Escalated Complaint Process Flowchart</i> and noted PG&E's intake channels for customer complaints: - Internal: Customer Contact Center, Executive Offices, Media Relations, Government Relations, and Regulatory Relations.	

Assessment procedures	Assessment test results	Exceptions
	- External: The Utility Reform Network, Better Business Bureau, CPUC, and other regulatory or customer advocacy agencies. 1.h. Met with Senior Manager, Outreach and Escalations, and noted PG&E's escalations department inputs all customer complaints into a customer CRM database, which is used to track customer complaints from input to resolution. Customers who file complaints with the CPUC that are not resolved within ten days receive a PG&E credit in their account. 1.i. Met with Senior Customer Privacy Specialist and was informed that privacy related customer complaints are typically routed directly to the Customer Privacy team for resolution.	

CPUC Rule 3 c(2)	Rule description	Customer limitation: The notice required under section 2 shall provide a description of – (2) the means, if any, by which customers may limit the collection, use, storage or disclosure of Covered Information and the consequences to customers if they exercise such limits.	
Assessment procedures	Assessment test results		Exceptions
1. Assess whether PG&E's <i>Privacy Notice</i> addresses the explicit/implicit consent required to collect, use, and disclose Covered Information and other personal information.	1.a. Reviewed the <i>Privacy Notice</i> and noted that it addresses implicit customer consent for primary purposes and explicit consent is required for third-party information sharing: - "PG&E does not disclose a customer's Energy Usage Data to any other person or business entity without your prior consent, except as necessary for PG&E to: Provide services to you, operate and maintain PG&E's electric or gas system, comply with a valid warrant, subpoena, or court order, comply with a valid CPUC request or request from other state or federal governmental agencies with legal authority to obtain the data from PG&E, enable third parties to provide utility-related services on behalf of PG&E – but only if necessary to render the service and subject to confidentiality and security requirements, [and] assist emergency responders in situations of immediate threat to life or property." - The <i>Privacy Notice</i> also addresses customers rights to limit the information provided to PG&E. (See CPUC Rule 3c(2) Test Result) 1.b. Reviewed <i>Third-party Requests for Customer Information Standard</i> document available to PG&E's employees and noted that it referenced the following forms that customers may complete to authorize release of information: - Form 79-1095: Authorization to Receive Customer Information or Act on a Customer's Behalf - Form 79-1096: Authorization to Receive Customer Information or Act Upon a Customer's Behalf (Spanish)		

Assessment procedures	Assessment test results	Exceptions
	- Form 79-1097: Request for Change of Mailing Address to a Third-party Address - Form 79-1099: Property Management Authorization Agreement - Form 79-1147: Authorization or Revocation of Authorization to Receive Customer Usage Information - Form 79-1186: Share My Data Customer Authorization - Other approved consent forms as approved and designated for use by the PG&E Customer Privacy Department. 1. c. Met with Supervisors from Quality Assurance, Operations, and Contact Center Operations, and was informed that PG&E does not provide third parties with Covered Information without Customer Authorization. There must be a valid authorization form on file for information to be shared with a third party.	
2. Assess whether PG&E communicates to individuals the consequences of denying consent.	2. a. See CPUC Rule 3c(2) test results. 2. b. Reviewed the <i>Privacy Notice</i> and noted that customers may dispute, ask questions, or place complaints by contacting PG&E through mail, via PG&E's website, or by phone. PG&E's <i>Privacy Notice</i> also contains a "Managing Your Information" section explaining how customers can access and manage their Personal Information, which includes how a customer can limit or opt out of the collection and sharing of their information and the consequences for denying consent or limiting information. The following are possible consequences of limiting information or denying consent: - If the Customer does not provide a valid social security number, then a deposit may be charged and an alternate form of identification will be requested - If the Customer does not provide an email address, then they will not be able to take advantage of online services such as electronic billing and payments	

Assessment procedures	Assessment test results	Exceptions
	2.c. Reviewed the SmartMeter Opt-Out Program publicly available at PGE.com and noted for customers who do not wish to have advanced meters installed on their homes, they can opt out by submitting a "SmartMeter Opt-Out" form online (link provided), submitting a request in-person at the customers' local PG&E office, or by calling 1-866-743-0263. This web page also includes a FAQ section with details and additional costs associated with opting out.	
3. Inspect PG&E's systems where Covered Information is collected to assess whether customers' implicit or explicit consent preferences are captured (before data transfer).	3.a. Reviewed the customer account online registration process and noted that in order to create an account, the customer must check a box acknowledging review and agreement to PG&E's <i>Privacy Policy</i> and <i>Terms of Use</i>, which states: "By establishing a User Account and obtaining access to customer energy, billing, and other personal data, you are agreeing and representing that you are either (1) the PG&E customer for such data; or (2) a representative of the PG&E customer, duly and expressly authorized in writing by the customer to obtain access to such data on that customer's behalf, which documentation of authorization PG&E may require at any time." 3.b. Reviewed "How to share your data with a company" page on PG&E's public webpage, and noted that this is the next generation of the Green Button Connect My Data tool. Share My Data enables customers to share energy usage with approved third-party companies through two methods: - Customers can share data when they register with a third-party company, or - Customers can authorize access to their data through their PG&E online account. In addition, customer consent to share information with a third party is explicitly captured. Customers are prompted to provide service ID and set an energy data access end date (i.e., a third party can have access to CEUD indefinitely or for a specified period of time). Customers can also manage accounts, modify authorization, or cancel authorization any time in their PG&E online account.	

Assessment procedures	Assessment test results	Exceptions
	3.c. Reviewed PG&E's Website <i>Terms of Use</i> and noted that it includes acceptance of terms that explicitly state the following: - "Note: By using this website, you will be accepting these terms of use and the referenced requirements of PG&E's privacy policies and security policies. If you do not accept these terms of use, do not use this website." - "Information collected from you on the Website (including information about your company energy account and personal information) is subject to the PG&E's Privacy Policy and other federal, state and local laws protecting your privacy." A link to the <i>Privacy Policy</i> is included.	

CPUC RULE 4 Individual participation (Access and control)

Overall assessment result		No exceptions noted.	
CPUC Rule 4 a(1)	Rule description	Access: Covered entities shall provide to customers upon request convenient and secure access to their Covered Information— (1) in an easily readable format that is at a level no less detailed than that at which the covered entity discloses the data to third parties.	
Assessment procedures		Assessment test results	Exceptions
1. Assess whether PG&E's <i>Privacy Notice</i> addresses the provision of access to individuals to their Covered Information.		1.a. Reviewed PG&E's <i>Privacy Notice</i> and noted that it states: "Access to Energy Usage Data is provided either through monthly billing statements or through the online Your Account portal." A link to the online Your Account portal is included in the Notice.	
		1.b. Reviewed PG&E's <i>Privacy Policy</i> and noted it states that customers have secured access to their information through their monthly bills and their online account, which they can access on PG&E's website.	
2. Assess whether PG&E's internal policies describe the process for providing customers with access to their Covered Information.		2.a. Reviewed the <i>Customer Privacy Standard</i> and noted it states employees should provide personal information only to the individual whose personal information belongs to, to an authorized individual or to an authorized third party.	
		2.b. Reviewed internal guidelines for Customer Contact Center employees, available on PG&E's intranet, for handling requests for customer's account information and ensuring customer privacy. Noted the guidelines include instructions regarding acceptable means for receiving third-party authorization from a customer to share her or his Covered Information.	
		2.c. Reviewed internal <i>Contact Center Operations</i> document detailing the appropriate ways to authenticate a customer of record or an authorized third party in order to discuss Covered Information. This document is sent to Contact Center employees annually to ensure compliance with PG&E policies for authenticating customers and sharing Covered Information.	

Assessment procedures	Assessment test results	Exceptions
	2.d. Met with a Supervisor, Contact Centers and Regulatory Compliance Lead, and was informed that CSRs are instructed on how to inform customers about ways to access their Covered Information. 2.e. Met with a sample of CSRs, which included CSRs located in the Contact Centers, as well as remote workers. KPMG notes these CSRs represent various levels and different specializations CSRs may have to assist various types of customers. We were informed that CSRs can instruct the customer how to access his or her Covered Information, make updates to personal information, and use the different features offered through the Customer's online account.	
3. Assess whether customers can access their Covered Information in a detailed, yet easy-to-read format.	3.a. Obtained and inspected a screenshot of a customer's online account and noted customers can access their energy usage information in the "Usage, Rates and Savings" tab by clicking on the "Energy Usage Details" link. Electric usage can be viewed by day, bill, or interval. Natural gas usage can be viewed by day or bill, and is presented in a simple bar graph. Customers have 24-hour access to their energy usage data (historical and current), billing information, meter information and a personal profile of information collected by PG&E through their online account. 3.b. Reviewed the <i>Privacy Notice</i> and noted that it contains a section called "Viewing Your Energy Usage Data," which states that the customer's online PG&E account displays Energy Usage Data one day after actual usage and shows hourly usage for residential customers and data in 15-minute intervals for non-residential (business) customers. 3.c. Reviewed <i>Energy Usage Inquiries</i> guidance on the intranet and noted that CSRs are instructed to advise customers that they can log into "Your Account" at pge.com to view a rate analysis, manage usage and costs, and perform an energy checkup, among other things. 3.d. Reviewed "Energy Usage Details" and noted that the "Similar Homes" tab provides information regarding how <i>Home Energy Reports</i> can be used to track home energy usage, compare one's home to similar homes in the area, and save money.	

Assessment procedures	Assessment test results	Exceptions
	3.e. Reviewed a sample <i>Home Energy Report</i> and noted that it includes information comparing the customer's usage details to those of similar homes that are nearby and also to those similar homes that are considered "efficient." 3.f. Met with a sample of CSRs, which included CSRs located in the Contact Centers, as well as remote workers. KPMG notes these CSRs represent various levels and different specializations CSRs may have to assist various types of customers. We were informed CSRs can provide Covered Information to a Customer who has been properly authenticated.	

CPUC Rule 4 b(1)-(3)	Rule description	Control:
		Covered entities shall provide customers with convenient mechanisms for— (1) granting and revoking authorization for secondary uses of Covered Information, (2) disputing the accuracy or completeness of Covered Information that the covered entity is storing or distributing for any primary or Secondary Purpose, and (3) requesting corrections or amendments to Covered Information that the covered entity is collecting, storing, using, or distributing for any primary or Secondary Purpose.
Assessment procedures	Assessment test results	Exceptions
1. Assess whether PG&E has a process in place for providing customers with access to grant and revoke authorization for secondary uses.	1.a. Reviewed <i>Third-party Requests for Customer Information Standard</i> and noted PG&E requires customer consent prior to disclosure of Covered Information. The standard also provides information on the <i>Authorization to Receive Customer Information or Act on a Customer's Behalf</i> (CISR) forms, which must contain the customer's written consent prior to release of information. 1.b. Reviewed "How to share your data with a company" section on PG&E's public webpage and noted that this is the next generation of the Green Button Connect My Data tool. Share My Data enables customers to share energy usage with approved third-party companies through two methods: - Customers can share data when they register with a third-party company, or - Customers can authorize access to their data through their PG&E online account. In addition, customer consent to share information with a third party is explicitly captured within the customer's PG&E online account. Customers are prompted to provide service ID and set an energy data access end date (i.e., a third party can have access to CEUD indefinitely or for a specified period of time). Customers can also manage accounts, modify, or cancel authorization any time in their PG&E online account. 1.c. Inspected CISR forms and noted that customers have to provide consent for disclosure of specific account information for a specified time period to designated third parties.	

Assessment procedures	Assessment test results	Exceptions
	1.d. Met with Manager, Customer Revenue Processing, and was informed PG&E only shares Covered Information with third parties with prior customer written consent through the CISR process. The customer must designate in the CPUC-approved CISR form the type of information shared and the specified time period for sharing the information. Only upon receiving the signed CISR form will PG&E disclose the requested information to the third party and for the designated purpose. 1.e. Also see CPUC Rule 5c test results.	
2. Assess whether PG&E has a process in place for customers to access their Covered Information and dispute its accuracy and completeness.	2.a. Reviewed <i>Privacy Notice</i> and noted that customers have access to their CEUD through monthly bills and their PG&E online "Your Account" portal. Customers can also contact PG&E through phone, web, or mail with questions, concerns, or to dispute accuracy and completeness. 2.b. Obtained and inspected a screenshot of a customer's online account and noted customers can access their CEUD through an "Energy Usage Details" link. The resulting report organizes the customer's electricity and natural gas usage data by month, bill, day, or interval, as selected by the customer. In addition, the online account provides customers with access to usage and other personal information, as well as the ability to dispute potential incorrect, inaccurate, or incomplete data. 2.c. Reviewed the <i>Self-Service Options</i> document on PG&E's intranet site and noted CSRs are instructed of all actions a customer can take to self-service their accounts within the "Your Account" portal. These actions include: add/update email addresses, add/update phone numbers, add/update notification preferences, and change billing address among others. 2.d. Reviewed a sample customer bill and noted that it provides the customer a phone number (1-800-743-5000) for customers to inquire, dispute, or question their bill. The customer bill also states if the customer is not satisfied with PG&E's response, then the customer can contact the CPUC at 1-800-649-7570 or by visiting www.cpuc.ca.gov/complaints/.	

Assessment procedures	Assessment test results	Exceptions
	2.e. Met with a sample of CSRs, which included CSRs located in the Contact Centers, as well as remote workers. KPMG notes these CSRs represent various levels and different specializations CSRs may have to assist various types of customers. We were informed that CSRs provide customers with information on how they can update and correct their personal information on file. CSRs can also make updates to customer profiles upon request or if necessary. 2.f. Reviewed <i>Customer Relations Processes</i> and noted customer complaints are received through the Customer Contact Center, Media Relations, Government Relations, Regulatory Relations, Executive Office, The Utility Reform Network (TURN), Better Business Bureau, CPUC, or other regulatory or customer advocacy agencies. When a complaint is received from a customer, information is entered into a complaint database. The consultant then determines whether the issue requires investigation by another department or handles it as appropriate. Once the investigation is complete, the consultant contacts the customer to resolve issue and documents resolution in the database maintained by Customer Relations.	
3. Assess whether PG&E has a process in place to make corrections or amendments to the collection, storage, use, or distribution of Covered Information upon a customer's request.	3.a. Reviewed <i>Privacy Notice</i> and noted that it indicates that customers may contact PG&E through phone, email, or mail with any questions, concerns, or complaints. 3.b. Met with a sample of CSRs, which included CSRs located in the Contact Centers, as well as remote workers. KPMG notes these CSRs represent various levels and different specializations CSRs may have to assist various types of customers. KPMG was informed that CSRs can make updates to customer's records, including correcting addresses, phone numbers, names, and social security numbers. In addition, CSRs are also trained on how to answer questions or resolve disputes on customer bills.	

Assessment procedures	Assessment test results	Exceptions
	3.c. Reviewed the SmartMeter Opt-Out Program publicly available at PGE.com. Customers are able to change how their CEUD is collected by participating in the SmartMeter Opt-Out Program. The webpage provides a table that compares the SmartMeter to the Analog Meter, methods for customers to opt out, and CPUC rules for SmartMeter opt-out fees. Customers who do not wish to have advanced meters installed on their homes, can opt out by submitting a "SmartMeter Opt-Out" form online (link provided), submitting a request in-person at the local PG&E office, or by calling 1-866-743-0263.	

CPUC Rule 4	Rule description	Disclosure pursuant to legal process:		
c(1)-(6)		(1) Except as otherwise provided in this rule or expressly authorized by state or federal law or by order of the Commission, a covered entity shall not disclose Covered Information except pursuant to a warrant or other court order naming with specificity the customers whose information is sought. Unless otherwise directed by a court, law, or order of the Commission, covered entities shall treat requests for real-time access to Covered Information as wiretaps, requiring approval under the federal or state wiretap law as necessary. (2) Unless otherwise prohibited by court order, law, or order of the Commission, a covered entity, upon receipt of a subpoena for disclosure of Covered Information pursuant to legal process, shall, prior to complying, notify the customer in writing and allow the customer seven days to appear and contest the claim of the person or entity seeking disclosure. (6) On an annual basis, covered entities shall report to the Commission the number of demands received for disclosure of customer data pursuant to legal process or pursuant to situations of imminent threat to life or property and the number of customers whose records were disclosed. Upon request of the Commission, covered entities shall report additional information to the Commission on such disclosures. The Commission may make such reports publicly available without identifying the affected customers, unless making such reports public is prohibited by state or federal law or by order of the Commission.		
Assessment procedures	Assessment test results		Exceptions	
1. Assess whether PG&E has procedures in place to help ensure proper handling and documentation of any Covered Information data disclosures for legal reasons.	1.a. Reviewed PG&E's <i>Privacy Notice</i> and noted that customers are informed that PG&E may disclose Covered Information without customer's prior consent in order to "comply with a valid warrant, subpoena, or court order" and to "comply with a valid California Public Utilities Commission request or request from other state or federal governmental agencies with legal authority to obtain the data from PG&E." 1.b. Reviewed the <i>Subpoenas or Legal Documents General Reference Article</i> on the intranet and noted that upon receiving a subpoena, CSRs are required to contact the Law Department by emailing the request including the customer's relevant identification details. PG&E has up to 15 days to respond to third-party subpoenas and five days to respond to criminal subpoenas. 1.c. Reviewed the <i>Search Warrant General Reference Article</i> on the intranet and noted that upon receiving a search warrant, employees are required to contact the Law Department and the Corporate Security Department			

Assessment procedures	Assessment test results	Exceptions
	and request identification and a copy of the warrant. The employee is also not to consent to a search either orally or in writing. 1.d. Reviewed <i>Service of Legal Papers</i> guidance document available to all employees in PG&E's intranet and noted that when PG&E employees receive a summons or a subpoena, they are required to contact the Law Department and deliver the documents to the Law Department through the quickest and most practical method (via fax and mail, or hand - delivery). The document specifies that employees are not to "give documents or information to anyone serving a subpoena. Such information is only provided pursuant to a properly served subpoena that has been reviewed by the Law Department." 1.e. Met with Chief Counsel, Strategy and Policy, and noted that PG&E has procedures in place for handling and documenting Covered Information data disclosures for legal purposes. Inquiries pursuant to legal process are handled by the Law Department, which reviews them for authenticity and other legal requirements prior to disclosing the requested data (e.g., PG&E only discloses customer data when it has the customer's consent, or if a lawful subpoena or warrant is present). If the Law Department deems a request reasonable, PG&E notifies the customers through a standard written notice, <i>Notice of Disclosure of Information letter</i>, and allows seven days for the customers to contest the subpoena. PG&E's Law Department manages, keeps track of, and reports disclosures pursuant to legal process, including the statistics provided in PG&E's <i>Annual Privacy Report</i>. 1.f. Obtained and inspected screen shots of the system where all legal requests are recorded and tracked and noted there is a section to denote if "Usage Data" is being requested. The Law department is able to pull a report from this system, which is used for reporting the statistics provided in PG&E's <i>Annual Privacy Report</i>. 1.g. Reviewed <i>Customer Privacy Standard</i> guidance document for employees with access to Covered Information and noted that PG&E keeps personal information confidential and does not disclose information unless it is to law enforcement officers pursuant to legal process, to the CPUC, or to others as required by laws or regulations governing PG&E.	

Assessment procedures	Assessment test results	Exceptions
2. Inspect documentation regarding disclosure of Covered Information pursuant to a legal purpose to test whether PG&E properly handled the demand.	2.a. Obtained and reviewed a sample of the <i>Notice of Disclosure of Information</i> letter that is sent to specific customer(s) that are noted in the subpoena prior to PG&E disclosing Covered Information. - We noted PG&E provided a seven (7) day notice for the demand pursuant to legal process. The letter states if the customer opposes the disclosure of information being sought, the customer will need to obtain an order from the court to prevent disclosure of such information. - In addition, the letter indicates the customer should fax any documents used to suppress disclosure of information to PG&E's subpoena desk, as such, PG&E will await the outcome of such legal process before producing the requested customer information, unless directed otherwise by the court. 2.b. Reviewed <i>Third-party Requests For Customer Information</i> standard intended for all PG&E employees and noted that exceptions to release of customer information without written consents applies to requests by regulatory agencies with legal authority, or a court or law enforcement agency pursuant to regulation, statute, or legal process. 2.c. Reviewed PG&E <i>Privacy Notice</i> and noted that PG&E may disclose Covered Information without customer consent to respond to valid warrant, subpoenas, or court orders.	
3. Inspect the Annual Report submitted to the Commission to test whether PG&E reported the number of demands received for disclosure of customer data pursuant to a legal process and the number of customers whose records were disclosed.	3.a. Reviewed PG&E's <i>2020 Annual Privacy Report</i> submitted to the CPUC and noted that PG&E received 341 demands to disclose customer data pursuant to a legal process and the number of customers whose records were disclosed was approximately 107.	

CPUC Rule 4(d)		Rule description	Disclosure of information in situations of imminent threat to life or property: These rules concerning access, control and disclosure do not apply to information provided to emergency responders in situations involving an imminent threat to life or property. Emergency disclosures, however, remain subject to reporting rule 4(c)(6).	
Assessment procedures		Assessment test results	Exceptions	
1.	Assess whether PG&E has procedures in place to help ensure proper handling and documentation of any Covered Information data disclosures in situations of imminent threat to life or property.	1.a. Reviewed PG&E's <i>Privacy Notice</i> and noted that customers are informed that PG&E may disclose Covered Information without customer's prior consent in order to "assist emergency responders in situations of immediate threat to life or property."		
2.	Inspect documentation regarding disclosure of Covered Information in situations of imminent threat to life of property.	2.a. Met with Chief Counsel, Strategy and Policy, and noted that the requests typically would come through the Customer Contact Center. In situations of imminent threat to life or property, the Customer Privacy and Law Departments would be involved in handling the request, although there have been no demands received for disclosure of customer data pursuant to imminent threat to life or property during the covered period.		
3.	Inspect the Annual Report submitted to the Commission to assess whether PG&E reported the number of demands received for disclosure of customer data pursuant to situations of imminent threat to life or property and the number of customers whose records were disclosed.	3.a. Reviewed the Company's <i>2020 Annual Privacy Report</i> submitted to the CPUC and confirmed that PG&E received zero (0) requests to disclose Covered Information for situations in regard to situations of imminent threat to life or property in 2020.		

CPUC RULE 5 Data minimization

Overall assessment result		No exceptions noted.
CPUC Rule 5	Rule description	Generally: Covered entities shall collect, store, use, and disclose only as much Covered Information as is reasonably necessary or as authorized by the Commission to accomplish a specific Primary Purpose identified in the notice required under section 2 or for a specific Secondary Purpose authorized by the customer.
a		
Assessment procedures		Assessment test results
1. Assess whether PG&E has Data Minimization procedures in place as they relate to the collection, storage, usage, and disclosure of Covered Information for Primary Purposes.		1.a. Reviewed the internal <i>Customer Privacy Standard</i> and noted that PG&E has the following Data Minimization practices in place: - Only data required to perform business processes should be collected; - Ensure personal information that is collected is only used for specific, explicit, and legitimate business purposes; - Only using and accessing the minimum amount of personal information needed to perform job responsibilities; - Data that is processed should fulfill a documented business process as defined by the applicable PG&E Privacy Notice and only be used as needed to fulfill that use; - Data that is shared should only be provided to those with a business need to know; - Data should be deleted upon completion of a specific business process and when it is no longer required to be retained. 1.b. Reviewed the <i>Procedure for Customer Data Release to PG&E Vendors</i> document and noted that employees are instructed to reduce the amount of classified information leaving the company through the use of minimization, anonymization, and aggregation tools. In addition, the document states: "Per CPUC directive, PG&E may not disclose to any third party more customer information than is reasonably necessary or as
Exceptions		

Assessment procedures	Assessment test results	Exceptions
	authorized by the CPUC to carry out specific utility purpose of the requested data, or the specific purpose authorized by the customer." 1.c. Reviewed PG&E's <i>Privacy Notice</i> and noted that it states: "... we only retain personal information for as long as is reasonably necessary for our business purpose or as required by law." 1.d. Observed that mailroom containing physical documents sent by customers is locked for non-mailroom personnel during virtual walkthrough of the Contact Center. 1.e. Met with Director, Risk, Compliance, Audit & Privacy, and noted that the privacy team performs Privacy Impact Assessments (PIA) to evaluate user requests for Covered Information and documents within the privacy management platform.	
2. Assess whether PG&E has Data Minimization procedures in place as they relate to the collection, storage, usage, and disclosure of Covered Information for Secondary Purposes.	2.a. Reviewed the <i>Third-party Requests for Customer Information</i> and noted that PG&E personnel are not to release personal information to any third party without the customer's prior written consent. All Personal Information that is not in immediate use is stored in locked file cabinets. When disposing of Personal Information, documents are either shredded immediately or placed in a locked shred bin. Shredders are located at each printer in the facility, as well as shred bins for larger files. 2.b. Conducted a virtual site walkthrough of the Contact Center and learned that during the covered period, the majority of PG&E's workforce transitioned to working remotely or from home in March due to the COVID-19 pandemic. Physical documentation handling was then drastically reduced, as printing was not allowed from remote computers. Therefore, shredders and locking protocols for data minimization were followed and relevant during the first three months of the covered period, before the lockdown was implemented by the state and local authorities. 2.c. Met with a sample of CSRs, which included CSRs located in the Contact Centers, as well as remote workers. KPMG notes these CSRs represent various levels and different specializations CSRs may have to assist various types of customers. KPMG informed that CSRs were required to review and electronically sign a supplement to the Code of Conduct	

Assessment procedures	Assessment test results	Exceptions
	relating to COVID-19. This supplemental clause includes specific protocols CSRs must adhere to in a remote environment in order to maintain privacy and security of personal information, including energy usage data. 2.d. Obtained and reviewed a copy of the <i>COVID-19 Supplement to the Code of Conduct</i> and noted the supplemental clause is intended to expand upon existing company guidelines. The clause provides employees with clear responsibilities for protecting PG&E data and customer information when working remotely.	
3. Assess whether PG&E has internal privacy policies addressing Data Minimization.	3.a. Reviewed internal policy documents and noted that PG&E has an <i>Information Classification and Protection Standard</i> that outlines the classification levels and the protections required for information at each level. In addition, the standard states: "PG&E limits the amount of information distributed or shared to the least amount of information required to accomplish business objectives." 3.b. Reviewed the internal <i>Customer Privacy Standard</i> and noted that PG&E uses an overarching set of principles for protecting customer-specific information, which includes transparency, purpose specification, individual participation, Data Minimization, use and disclosure limitation, security safeguards, and training, auditing, and reporting. 3.c. Reviewed the <i>Privacy and Security Awareness</i> training, which is an enterprise-wide training mandatory for all PG&E employees and non-employees and noted it includes data minimization guidance. 3.d. Reviewed the PG&E <i>Code of Conduct</i> and noted that PG&E employees may have access to personal or sensitive information, including personally identifiable information of PG&E customers, employees, or suppliers. The code further states: "You must maintain the confidentiality and privacy of this information, and you may only disclose it with proper authorization or when legally mandated." In addition, the Code also prohibits employees from accessing or viewing sensitive, confidential, or personally identifiable information for a non-business reason.	

Assessment procedures	Assessment test results	Exceptions
4. Assess whether PG&E implements Data Minimization across User Access roles to systems and applications where Covered Information is stored, used, or processed.	4.a. Met with Director, Risk, Compliance, Audit & Privacy, and noted that the privacy team previously reviewed user access roles and entitlements for the customer information system to ensure appropriate user access to Covered Information based on job responsibilities. In addition, the Privacy Impact Assessment (PIA) process is used to evaluate user requests for Covered Information. 4.b. During virtual walkthroughs of the Customer Contact Center and Customer Service Center observed employees are encouraged to practice Data Minimization and to only access the information that is needed to resolve the issue. 4.c. Met with Principle, Data Security Management, and noted that the data security team provides services for masking data to be used in lower environments. 4.d. Noted that as part of Data Minimization effort the Data Security team is in the process of analyzing data in the lower environments based on data sensitivity types in an effort to reduce CEUD data footprint. Data scanning initiatives are implemented to scan lower environment databases to discover any data that is lacking security controls. 4.e. Met with Supervisor, Contact Center Quality Assurance, and noted once a customer of record or authorized third party have been authenticated, the CSR is instructed to only discuss and share the information authorized to be shared and only what is requested or necessary for that specific call. 4.f. Met with Quality Assurance Supervisor for the Contact Centers and was informed an external QA team evaluates three random calls per employee every month to ensure compliance. 4.g. Observed the <i>Customer Service Representative Quality Assurance Non-Compliance Log</i> and noted four instances of Rule 27 non-compliance. In each instance, the non-compliance was investigated and discussed with the employee to avoid future instances. These non-compliance situations were also reported and escalated to management for tracking and monitoring purposes.	

CPUC Rule 5	Rule description	Data retention:	
b		Covered entities shall maintain Covered Information only for as long as reasonably necessary or as authorized by the Commission to accomplish a specific Primary Purpose identified in the notice required under section 2 or for a specific Secondary Purpose authorized by the customer.	
Assessment procedures		Assessment test results	Exceptions
1. Assess whether PG&E's internal policies address a document retention policy covering all relevant aspects.		1.a. Reviewed internal <i>Records Management Standards</i> that governs the retention of PG&E records/information and noted that the policy applies to all PG&E employees and non-employees, including the Board of Directors. The policy provides guidance on how to manage all records consistent with ARMA International Generally Accepted Recordkeeping Principles, legal hold requirements, and applicable laws. The recordkeeping requirements are designed to ensure that records are appropriately accessible, managed, preserved, retained, and disposed of in accordance with business and applicable legal requirements. The document also includes links to the <i>Enterprise Records and Information Management Disposition Standard</i>, <i>Information Classification and Protection Standard</i>, and <i>Third-party Production and Retention of PG&E Records</i>, among others. 1.b. Reviewed the <i>Records Retention Schedule</i> (available on PG&E's intranet site) and noted that the schedule provides detailed retention periods for all LOBs.	
2. Assess whether the PG&E retention policies are periodically reviewed and updated where necessary.		2.a. Reviewed the <i>Enterprise Records and Information Management Standard</i> and noted it states that ERIM will facilitate an annual review of the <i>Enterprise Records Retention Schedule</i> (ERRS). 2.b. Reviewed an <i>Enterprise Records and Information Management Standard</i> bulletin published on November 24, 2020 and noted it announced that ERRS has been updated and is now available in a web retention system. A link to the ERRS is provided in the bulletin and is also posted on PG&E's intranet site.	

Assessment procedures	Assessment test results	Exceptions
	2.c. Met with Director, Enterprise Information Governance, and noted that ERIM utilizes a retention program, which will notify ERIM when required regulations are updated, if there are new regulations, or if there are regulations that need to be replaced. The retention schedule is then updated on a quarterly basis, if needed.	
3. Assess whether a management procedure exists to help ensure that documents are retained in compliance with Company policies and that records are kept for only as long as reasonably necessary.	3.a. Reviewed the <i>Physical and Electronic Records Disposition Procedure</i> and noted that it provides a detailed process for the review and approval of disposition eligible records, as outlined below: - ERIM will generate "master" eligibility reports at least on an annual basis. - ERIM (RIM Leads) are responsible for verifying the accuracy of the master eligibility reports. - Managers serve as primary approvers and are responsible for reviewing and approving their department's master eligibility reports and submitting final approval via the electronic document routing system. - Directors serve as final approvers. - If issues are identified, managers or directors are responsible for contacting ERIM for resolution. - ERIM will route approved master eligibility reports to Law via an electronic document routing system for legal hold review and analysis. - For records that have been approved for disposition by all required parties, ERIM executes final disposition. A Certificate of Destruction will be provided and will be maintained by ERIM.	

Assessment procedures	Assessment test results	Exceptions
4. Inspect evidence that PG&E records are retained and disposed of in compliance with record retention policies.	4.a. Met with Director, Enterprise Information Governance, and was informed that no records containing Covered Information were purged in 2020.	
5. Inspect evidence that PG&E destroys documents that are no longer necessary or when the appropriate retention policy ends.	5.a. Per inquiry with Senior Privacy Analyst, no documents were purged in 2020, but ERIM experts are expected to begin disposition in 2021. 5.b. Observed locked shred bins at facilities (Customer Contact Center and Billing Operations). Based on an inquiry during site walkthroughs, a third party will perform on-site shedding of bin contents.	

CPUC Rule 5	Rule description	Data disclosure:	
c		Covered entities shall not disclose to any third party more Covered Information than is reasonably necessary or as authorized by the Commission to carry out on behalf of the covered entity a specific Primary Purpose identified in the <i>Notice</i> required under section 2 or for a specific Secondary Purpose authorized by the customer.	
Assessment procedures	Assessment test results		Exceptions
1. Understand PG&E's privacy policies to assess whether they: — describe the practices related to sharing personal information (if applicable) with third parties and the reasons for information sharing, — identify third parties or classes of third parties to whom personal information is disclosed.	1.a. Reviewed the <i>Privacy Notice</i> and noted that PG&E informs customers the Company may share Energy Usage information with third parties for purposes of providing customers with services and operating the utility system. The <i>Privacy Notice</i> specifies that it does not use Covered Information for purposes beyond what's included in the <i>Privacy Notice</i>, and that PG&E does not share identifiable information with third parties without the customers' prior written consent. In addition, it indicates that Customers may authorize third parties to access their Personal Information, including Energy Usage Data. PG&E may disclose personal information, including Energy Usage Data, without the customer's prior consent under the following circumstances: - To provide utility services to customers - To operate and maintain PG&E's electric or gas system - To comply with a valid warrant, subpoena, or court order - To comply with a valid CPUC request or request from other state or federal governmental agencies with legal authority to obtain the data from PG&E - To enable third parties to provide utility-related services on behalf of PG&E—but only if necessary, to render the service and subject to confidentiality and security requirements - To assist emergency responders in situations of immediate threat to life or property 1.b. Reviewed the <i>Procedure for Customer Data Release to PG&E Vendors</i> document and noted that employees are instructed to reduce the amount of classified information leaving the company through the use of minimization, anonymization, and aggregation tools. In addition, the		

Assessment procedures	Assessment test results	Exceptions
	document states: "Per CPUC directive, PG&E may not disclose to any third party more customer information than is reasonably necessary or as authorized by the CPUC to carry out specific utility purpose of the requested data, or the specific purpose authorized by the customer." 1.c. Reviewed the <i>Customer Privacy Standard</i> and noted that it includes the below guidelines to employees: - Ensure Personal information that is collected is only used for specific, explicit, and legitimate business purposes - Only use and access the minimum amount of personal information needed to perform job responsibilities - Provide personal information only to the individual whose personal information it is, or to an authorized individual or third party 1.d. Reviewed PG&E's Customer Privacy intranet resource webpage accessible to employees with access to PG&E's network and noted that it provides employees with guidance in maintaining information security and customer data privacy including the following: - PG&E Privacy Standards and Procedures: Provides links for PG&E's internal privacy related policies and procedures, including Third-party Requests for Customer Information. - Helpful PG&E Links: Incorporates privacy documents and guidelines such as the CISR Form for CEUD, <i>Code of Conduct, Setting Up a Successful Privacy Team</i>, etc. 1.e. Reviewed a list of 94 contractors and vendors identified as third parties with access to Covered Information during 2020 and confirmed that the count corresponds with the number of vendors reported in PG&E's <i>Annual Privacy Report</i>. 1.f. Reviewed <i>Third-party Requests for Customer Information Standard</i> and noted that third parties requesting Customer Information must identify the specific information requested.	

Assessment procedures	Assessment test results	Exceptions
	The department processing the request for personal information is responsible for retaining the consent documentation for purposes of records management, including records retention and request tracking. 1.g. Reviewed CPUC-approved CISR forms and noted that customers must provide written authorization to PG&E to allow a third party to receive customer information or act on the customer's behalf. In addition, the form clearly states what rights are delegated to third parties, what information the third party is entitled to receive and whether the authorization is being provided on a one time basis or on a longer term basis (not to exceed three years or can be indefinitely depending on what data the customer is granting access to). 1.h. Met with Manager, Customer Revenue Processing, and noted consistency with the information discussed during our meeting and with the reviewed CISR forms: - Form 79-1147 Authorization or Revocation of Authorization to Receive Customer Usage Information - Form 79-1095 Authorization to Receive Customer Information or Act Upon A Customer's Behalf 1.i. Reviewed <i>Supplier Code of Conduct</i> and noted PG&E instructs third parties that they should maintain and protect the confidentiality, integrity, and availability of information entrusted to it by PG&E, except when disclosure is legally mandated or is authorized by PG&E's Law Department or Enterprise Technology Risk Management Department. 1.j. Reviewed "How to share your data with a company" page on PG&E's public webpage and noted that customer consent to share information with a third party is explicitly captured. Customers are prompted to provide service ID and set an energy data access end date (i.e., a third party can have access to CEUD indefinitely or for a specified period of time). Customers can also manage accounts, modify, or cancel authorization any time in their PG&E online account. 1.k. Met with Manager, Customer Revenue Processing, and was informed that PG&E only shares Covered Information with third parties with prior customer written consent through the CISR process. The customer must designate in the CPUC-approved CISR form the type of information	

Assessment procedures	Assessment test results	Exceptions
	shared and the specified time period for sharing the information. Only upon receiving the customer-signed CISR form will PG&E disclose the requested information to the third party and for the designated purpose. 1.l. Met with Senior Manager, Community Vitality, and was informed that this group manages PG&E's communications with Electric Service Providers (ESP), Core Transport Agents (CTA), and Community Choice Aggregators (CCA). We were informed that these three types of third parties provide utility services to PG&E customers (in collaboration with PG&E) and have access to Covered Information. PG&E transfers Covered Information to ESPs and CTAs using an electronic data interchange (EDI) process. PG&E also requires third-party signatures of Service Agreements that include privacy and confidentiality responsibilities for the third party to comply with. KPMG observed templates for these contracts and note they included confidentiality and non-disclosure clauses in alignment with CPUC CEUD regulatory requirements. 1.m. Met with Manager, Vendor Risk Management, and was informed that if a vendor requests access to Covered Information, the request is reviewed by PG&E and if too much data is being requested, they will require the vendor to minimize the amount of data being requested. 1.n. Reviewed PG&E's 2020 Annual Privacy Report dated April 30, 2021 and noted that PG&E classified authorized third parties accessing Covered Information as contractors and vendors under authorized PG&E contracts.	

CPUC RULE 6 Use and disclosure limitation

Overall assessment result		Exception noted: PG&E's vendor contracts include privacy and security provisions and the Company performs detailed vendor security assessments prior to executing contracts and sharing Covered Information with a vendor. However, we observed inconsistent privacy and security provisions in vendor contracts, which in some cases were inconsistent with formal regulatory requirements.
CPUC Rule 6 c(1)-(3)	Rule description	Disclosures to third parties – (1) Initial disclosures by an electrical corporation: An electrical corporation may disclose Covered Information without customer consent to a third-party acting under contract with the Commission for the purpose of providing services authorized pursuant to an order or resolution of the Commission or to a governmental entity for the purpose of providing energy efficiency or energy efficiency evaluation services pursuant to an order or resolution of the Commission. An electrical corporation may disclose Covered Information to a third party without customer consent a. when explicitly ordered to do so by the Commission; or b. for a Primary Purpose being carried out under contract with and on behalf of the electrical corporation disclosing the data; provided that the covered entity disclosing the data shall, by contract, require the third party to agree to access, collect, store, use, and disclose the Covered Information under policies, practices and notification requirements no less protective than those under which the covered entity itself operates as required under this rule, unless otherwise directed by the Commission. (2) Subsequent disclosures: Any entity that receives Covered Information derived initially from a covered entity may disclose such Covered Information to another entity without customer consent for a Primary Purpose, provided that PG&E disclosing the Covered Information shall, by contract, require PG&E receiving the Covered Information to use the Covered Information only for such Primary Purpose and to agree to store, use, and disclose the Covered Information under policies, practices and notification requirements no less protective than those under which the covered entity from which the Covered Information was initially derived operates as required by this rule, unless otherwise directed by the Commission.

	(3) Terminating disclosures to entities failing to comply with their privacy assurances: When a covered entity discloses Covered Information to a third party under this subsection 6(c), it shall specify by contract, unless otherwise ordered by the Commission, that it shall be considered a material breach if the third-party engages in a pattern or practice of accessing, storing, using or disclosing the Covered Information in violation of the third-party's contractual obligations to handle the Covered Information under policies no less protective than those under which the covered entity from which the Covered Information was initially derived operates in compliance with this rule. If a covered entity disclosing Covered Information for a Primary Purpose being carried out under contract with and on behalf of PG&E disclosing the data finds that a third-party contractor to which it disclosed Covered Information is engaged in a pattern or practice of accessing, storing, using or disclosing Covered Information in violation of the third party's contractual obligations related to handling Covered Information, the disclosing entity shall promptly cease disclosing Covered Information to such third party. If a covered entity disclosing Covered Information to a Commission-authorized or customer-authorized third party receives a customer complaint about the third party's misuse of data or other violation of the privacy rules, the disclosing entity shall, upon customer request or at the Commission's direction, promptly cease disclosing that customer's information to such third party. The disclosing entity shall notify the Commission of any such complaints or suspected violations.	
Assessment procedures	Assessment test results	Exceptions
1. Understand PG&E's privacy policies to assess whether they: — describe the practices related to sharing personal information (if applicable) with third parties and the reasons for information sharing, — identify third parties or classes of third parties to whom personal information is disclosed.	1.a. See CPUC Rule 5c test results.	

Assessment procedures	Assessment test results	Exceptions
2. Assess whether PG&E informs customers that personal information is disclosed to third parties only for the purposes (a) identified in the Privacy Notice, and (b) for which the individual has provided implicit or explicit consent, or as specifically allowed or required by law or regulation before data is disclosed to third parties.	2.a. See CPUC Rule 5c test results 2.b. Reviewed the <i>Authorization to Receive Customer Information Or Act Upon A Customer's Behalf</i> (or CISR Form) and noted that by completing the form, the customer explicitly authorizes a third party to request and receive the customer's data such as billing history, account information, and usage data (up to a maximum of most recent 12 months). The customer must specify whether this is a one-time authorization, one-year authorization, or determine an expiration date (limited in duration to three years). The form also collects the third party's information, such as the entity's name and telephone number. By completing the form, the customer must provide their signature stating that "I understand that I may cancel this authorization at any time by submitting a written request." 2.c. Reviewed "How to share your data with a company" page on PG&E's public webpage and noted that this is the next generation of the Green Button Connect My Data tool. Share My Data enables customers to share energy usage with approved third-party companies through two methods: - Customers can share data when they register with a third-party company - Customers can authorize access to their data through their PG&E online account In addition, customer consent to share information with a third party is explicitly captured. Customers are prompted to provide service ID, and set an energy data access end date (i.e., third party can have access to CEUD indefinitely or for a specified period of time). Customers can also manage accounts, modify authorization, or cancel authorization any time in their PG&E online account.	
3. Assess whether PG&E communicates specific instructions for handling personal information and the consequences of improper	3.a. Reviewed PG&E's <i>Supplier Code of Conduct</i> publicly available at PGE.com and noted that the document outlines policies regarding information protection and confidentiality, including (1) adhering to privacy and information security laws and regulatory requirements, (2) maintaining and protecting the confidentiality, integrity, and availability of information, (3) ensuring confidential and protected information is not	See CPUC Rule 6c(5) Exceptions for further details.

Assessment procedures	Assessment test results	Exceptions
disclosure to the third-party prior to disclosing the information.	copied or shared without proper approvals, and (4) ensuring the security of systems by identifying and complying with applicable PG&E information and cyber security policies and standards. In addition, the <i>Supplier Code of Conduct</i> contains a clause which states: "Failure to comply with the expectations outlined in the Code of Conduct could result in termination of [the Supplier's] assignment and/or contract." 3.b. Inspected confidentiality and non-disclosure clauses in the General Terms and Conditions templates most frequently used by PG&E for engaging with suppliers with Covered Information access. - These General Terms and Conditions templates contain confidentiality clauses governing the handling of customer information. - Specifically, the templates contain a definition of confidential information and state that the information shall only be used for the purposes that was agreed upon between PG&E and the third party, and specifies that the information shall be kept confidential and third parties shall not disclose the confidential information to any other parties. - In addition, it includes an exhibit titled "Confidentiality and Data Security," which provides further detail for how PG&E data and confidential information is required to be handled. This contract exhibit also includes a clause requiring the contractor and its employees to sign a "Non-disclosure and Use of Information Agreement" prior to commencement of work. - The contract templates reviewed include potential breach of contract damages should the third party not adhere to the contract terms and quitable relief, including injunctive relief and specific performance. 3.c. Met with Senior Manager, Community Vitality, and was informed that CTAs and ESPs must be registered with the CPUC prior to executing a service agreement with PG&E. Customer billing information is transferred to these vendors through an EDI (Electronic Data	

Assessment procedures	Assessment test results	Exceptions
	Interchange) system. CCA service agreements also include nondisclosure of confidential information and indemnification clauses. 3. d. Reviewed templates for service agreements with Electrical Service Providers (ESPs), Community Choice Aggregators (CCAs), and Core Transport Agents (CTAs) who provide energy to PG&E's Customers and have access to Covered Information and noted that these third parties must sign service agreements with the Company, which define roles and responsibilities of both parties, including provisions with mandatory safeguards around customer information. 3. e. Reviewed the <i>Direct Access ESP Handbook</i>, available publicly on PGE.com, and noted ESPs are required to submit CISR Form 79-1095 <i>Authorization to Receive Customer Information or Act Upon a Customer's Behalf</i> prior to PG&E disclosing any customer Covered Information. 3. f. Inspected Attachment A - <i>Customer Authorization for Core Gas Aggregation Service</i> to the <i>Form 79-845 - CTA Service Agreement</i> and noted that prior to PG&E disclosing information, the customer is required to authorize the CTA to act on behalf of the Customer. In addition, they must agree that PG&E is authorized to release the Customer's current and historical gas usage, energy billing, and payment information to the CTA. 3. g. Obtained and inspected a sample of six executed vendor contracts with access to Covered Information and noted that they include confidentiality and data privacy provisions. - The confidentiality and data privacy clauses governing the handling of Covered Information include potential breach of contract damages should the third party not adhere to contract terms. - Additionally, the contracts restrict the use of confidential information solely for the purpose stated in the contract. While PG&E's vendor contracts include privacy and security provisions, we observed inconsistent privacy and security provisions, which in some	

Assessment procedures	Assessment test results	Exceptions
4. Understand whether third-party contracting documentation is consistent with the PG&E's policies and procedures.	cases were inconsistent with formal regulatory requirements. See CPUC Rule 6c(5) test results for further information. 4.a. Reviewed the <i>Third-party Services Management Procedure</i> and noted that all third parties must have a written formal agreement (e.g. service contract and nondisclosure agreement) with PG&E before providing services to PG&E. Written agreements must include the following components: Scope of work, identify data that PG&E will share, network connectivity requirements, hardware/software/firmware to be provided, "Right to Audit" language and requirements to implement appropriate security controls. 4.b. Reviewed <i>Third-party Services Management Standard</i> which indicates PG&E: - Completes a risk assessment (or Third-party Security Review "TSR") to help ensure suppliers who collect, store, use, or disclose PG&E's restricted and/or confidential information have security procedures in place and are capable of protecting PG&E's assets from unauthorized access, use, alteration, destruction, or disclosure. This assessment is performed on new vendors at onboarding, existing vendors annually, and at time of contract renewal. - LOBs are responsible to hold vendor accountable for remediation of all security control deficiencies and any gaps identified as part of the TSR assessment. - IT Compliance and Third-party Security and Risk Management track and monitor assessment risk findings to close of risk mitigation. 4.c. Observed that all vendors with access to CEUD data underwent an annual TSR review, which is required by PG&E's <i>Third-party Services Management Standard</i>. 4.d. Reviewed PG&E's <i>Contracting Requirements Standard</i> and noted that Law Department must review and approve every contract with a dollar value of \$5,000,000 or more and contracts involving high risk products or	

Assessment procedures	Assessment test results	Exceptions
	services. Contractors are not allowed to commence work until a valid contract is in place. 4.e. Reviewed the <i>Supplier Code of Conduct</i> and noted that PG&E requires the following of third parties: - Comply with privacy and information security laws and regulatory requirements when information and data about or from customers, consumers, employees, or suppliers is collected, stored, processed, transmitted, and shared. - Maintain and protect the confidentiality, integrity, and availability of information entrusted to it by PG&E, except when disclosure is legally mandated or is authorized by PG&E's Law Department or Enterprise Technology Risk Department. - Report any suspected data breach immediately following detection to Information Security's 24-hour emergency hotline at 415-973-2477. - If granted access to PG&E's information systems, ensure the security of those systems by identifying and complying with applicable PG&E information and cyber security policies and standards. 4.f. Reviewed the <i>Customer Energy Solutions (CES) General Conditions</i> dated August 2020, which is included in all CES contracts and noted the General Conditions requires every Contractor employee and Subcontractors to comply with the "Non-Disclosure and Use of Information Agreement" and "Confidentiality and Data Security" requirements. Contracted parties are required to (1) use the Confidential Information only for the purpose of providing work or services for PG&E, (2) not reproduce, copy Confidential Information, except as authorized by PG&E, (3) return Confidential Information to PG&E when no longer needed, and (4) safeguard PG&E's data as provided in the Confidentiality and Data Security exhibit. 4.g. Inspected contract template <i>General Terms and Conditions</i> and noted a confidentiality clause governing the handling of Covered Information. This clause includes that Contractors shall not disclose any confidential information to other third parties, including PG&E affiliates that produce	

Assessment procedures	Assessment test results	Exceptions
	energy or energy-related products or services, without prior written consent and approval of PG&E, or required by the disclosure requirements by law, rule, regulation or any other subpoena or ruling of governmental agency and potential breach of contract damages should the third party not adhere to contract terms. - The contract restricts the use of confidential information to solely the purposes stated in the contract and requires the contractor and its employees to sign a "Non-Disclosure and Use of Information Agreement." - In addition, the contract template includes language requiring contractors to comply with a Vendor Security Review conducted by PG&E before receiving any PG&E data. 4. h. KPMG confirmed that no third-party relationships were terminated or lost access in 2020, where the third party had access to Covered Information, as such no data was returned or destroyed by third parties with access to CEUD.	
5. Inspect sample evidence of acknowledgments/certifications from third parties regarding compliance with PG&E's data privacy policies.	5. a. Obtained and inspected six contracts for vendors who have access to Covered Information. It is noted that privacy and security provisions exist in contracts; however, language inconsistencies were identified during the examination. KPMG observed inconsistent standard provisions in the selected sample with regards to contractual data privacy standards required from suppliers with access to Covered Information. 5. b. Obtained and inspected sample vendor contracts with an ESP, CTA, and CCA who provide energy to PG&E customers and have access to Covered Information. These vendors are part of the Direct Access program and must sign service agreements with the Company, which define roles and responsibilities of both parties, including mandatory safeguards around Covered Information in alignment with CPUC requirements. PG&E also mandates nondisclosure of Confidential Information (including Covered Information) without PG&E's consent in the samples reviewed.	PG&E's vendor contracts include privacy and security provisions and the Company performs detailed vendor security assessments prior to executing contracts and sharing Covered Information with a vendor. However, we observed inconsistent privacy and security provisions in vendor contracts, which in some cases were inconsistent with

Assessment procedures	Assessment test results	Exceptions
6. Assess whether PG&E has a process in place to review contract compliance for third parties accessing or receiving Covered Information.	6.a. Met with Manager, Third-party Vendor Risk Management, and was informed that PG&E has a process to review suppliers for compliance, which includes vendor onboarding, risk management and contracting processes. PG&E Sourcing group and Third-party Vendor Risk Management groups monitor contract compliance, while the IT group monitors security compliance. A TSR assessment is conducted at onboarding of a new vendor and annually thereafter. 6.b. See CPUC Rule 6c(4) test results 6.c. Met with Manager, Vendor Risk Management, who communicated PG&E's new process relating to migrating their vendor lifecycle tracking to a centralized system. This system tracks the TSRs, PIAs, and contract approvals. It was noted that a contract cannot be published until the risk assessment is marked as "Completed" within the system. If there are any deficiencies noted in the initial PIA or TSR, they will be remediated before the contract is published. If deficiencies are noted in the annual TSR, the vendor will be given a specific time frame to remediate or replace the policy in place. Once the requirements have been met, the gap is closed out and marked as "Complete." 6.d. Reviewed a sample initial security questionnaire form provided to vendors and noted that this is a vendor intake form used to analyze and classify vendors into risk-based tiers from 1 to 4 (1-highest risk through 4-lowest risk). 6.e. Obtained a listing of vendors with access to CEUD information and noted they are assigned tiers 1 to 3. 6.f. Reviewed a sample TSR Questionnaire form provided to vendors and noted it has 79 questions related to various cybersecurity topics such as security policy, asset management, access control, privacy, and cloud. 6.g. Reviewed a sample of executed vendor contracts and noted that these contracts mention that that Contractor and PG&E agree to meet periodically to evaluate security measures, PG&E has the right to perform onsite security controls reviews, and has the ability to conduct audits to evaluate third party's compliance with the contract. We were	formal regulatory requirements.

Assessment procedures	Assessment test results	Exceptions
	informed during the Covered Period, no audit right was triggered to perform an evaluation of this nature. 6.h. Met with Director, Internal Audit, and was informed that PG&E has the ability to conduct audits to evaluate third-party compliance with contracts. KPMG learned that PG&E has executed this clause for third parties in the past; however, PG&E did not execute this clause for any third parties with CEUD access during the covered period under review. 6.i. Confirmed with Third-party Risk Management and the Privacy team that there were no vendors that have access to CEUD that had a data breach reported in 2020.	

CPUC Rule 6		Rule description
d(1)-(3)		
Secondary purposes: No covered entity shall use or disclose Covered Information for any Secondary Purpose without obtaining the customer's prior, express, written authorization for each type of Secondary Purpose. This authorization is not required when information is— (1) provided pursuant to a legal process as described in 4(c) above; (2) provided in situations of imminent threat to life or property as described in 4(d) above; or (3) authorized by the Commission pursuant to its jurisdiction and control.		
Assessment procedures	Assessment test results	Exceptions
1. Assess whether PG&E engages in Secondary Purposes, and assess if procedures are in place to: — notify individuals and obtain their consent prior to disclosing personal information to a third-party for purposes not identified in the Privacy Notice, — document whether PG&E has notified the individual and received the individual's consent, — monitor that personal information is being provided to third parties only for uses specified in the Privacy Notice.	1.a. See CPUC Rule 5c test results 1.b. Reviewed <i>Third-party Requests For Customer Information</i> , which is a document intended for all employees, and noted that PG&E informs employees that a signed CISR form from the customer of record must be received in order for any Covered Information to be released to a third party. PG&E provides the following guidance to employees "Customer consent must be express, written or approved electronic form, and specific to the purpose and the person or entity seeking the information in accordance with the requirements of the consent form." 1.c. Met with Manager, Customer Revenue Processing, and was informed that PG&E requires customer consent prior to disclosure of Covered Information to third parties, which would be documented through a completed and signed CISR form. The customer must designate in the CPUC-approved CISR form the type of information shared and the specified time period for sharing the information. Only upon receiving the customer-signed CISR form will PG&E disclose the requested information to the third party and for the designated purpose.	

Assessment procedures	Assessment test results	Exceptions
2. Assess whether PG&E has secondary use authorization forms customers sign to authorize use of Covered Information for secondary uses.	2.a. See CPUC Rule 6c(1) - (3) test results.	
3. Inspect evidence that customer consent authorizing use of Covered Information for Secondary Purposes is documented.	3.a. Met with Manager, Customer Revenue Processing, and was informed that the Customer Inquiry department receives and processes all Covered Information requests. The CISR process and forms are audited for compliance by performing periodic audits and reviews. In addition, the form is validated for accuracy and completeness prior to disclosing information to a third party. No exceptions were noted in the CISR process during the covered period. 3.b. Met with a sample of CSRs, which included CSRs located in the Contact Centers, as well as remote workers. KPMG notes these CSRs represent various levels and different specializations CSRs may have to assist various types of customers. KPMG was informed that CSRs can only share information with the customer of record or a third party if the appropriate authorization for is on file and valid. One CSR noted that if there are multiple parties present on the phone line, all requests for information must come directly from the customer of record and all responses are clearly directed to the customer of record.	

CPUC Rule 6	Rule description	Customer authorization:	
e(1)-(3)		(1) Authorization. Separate authorization by each customer must be obtained for all disclosures of Covered Information except as otherwise provided for herein. (2) Revocation. Customers have the right to revoke, at any time, any previously granted authorization. (3) Opportunity to Revoke. The consent of a residential customer shall continue without expiration, but an entity receiving information pursuant to a residential customer's authorization shall contact the customer, at least annually, to inform the customer of the authorization granted and to provide an opportunity for revocation. The consent of a non-residential customer shall continue in the same way, but an entity receiving information pursuant to a non-residential customer's authorization shall contact the customer, to inform the customer of the authorization granted and to provide an opportunity for revocation either upon the termination of the contract, or annually if there is no contract.	
Assessment procedures		Assessment test results	Exceptions
1. Assess whether customers receive the Privacy Notice and must provide separate authorization if information is being used for a new Secondary Purpose.		1.a. See CPUC Rule 5c for test results.	
2. Understand how customers are notified of their right to revoke any previously granted authorization and the process to do so.		2.a. Reviewed <i>Privacy Notice</i> and noted that customers can stop or limit third parties' use of previously authorized access to Covered Information. 2.b. Reviewed "How to share your data with a company" page on PG&E's public webpage, and noted that customers can cancel authorization at any time through their PG&E online account. 2.c. Reviewed a CISR Form publicly available at PGE.com and noted that in order to complete the form, customers must provide explicit consent and sign an acknowledgement clause that states "[the Customer] understands that [he/she] may cancel this authorization at any time by submitting a written request." In addition, customers have the option to grant or revoke authorization to third parties to receive usage information. The form notes that "the purpose of this form is to allow you, the customer, to exercise your right to choose whether to disclose your personal electricity and/or natural gas usage data to a third party."	

Assessment procedures	Assessment test results	Exceptions
	2.d. Met with Manager, Customer Revenue Processing, and was informed that customers can limit the length of their authorization on the CISR form. When the authorization expires, it will appear as such in the customer profile and the CSR will not release information to third parties. In addition, a customer can cancel a third party's authorization at any time by submitting a request.	

CPUC Rule 6		Rule description	Parity:
f			Covered entities shall permit customers to cancel authorization for any Secondary Purpose of their Covered Information by the same mechanism initially used to grant authorization.
Assessment procedures		Assessment test results	Exceptions
1.	Assess whether PG&E has a process in place to allow customers to cancel authorization for any Secondary Purposes.	1.a. See CPUC Rule 6e(2) test results	

CPUC Rule 6	Rule description	Availability of aggregated usage data: Covered entities shall permit the use of aggregated usage data that is removed of all PII to be used for analysis, reporting or program management provided that the release of that data does not disclose or reveal specific Covered Information because of the size of the group, rate classification, or nature of the information.	
g			
Assessment procedures	Assessment test results	Exceptions	
1. Assess whether PG&E's Privacy Notice or internal policies address the use of aggregate information.	1.a. Reviewed the <i>Privacy Notice</i> and noted that the use of aggregate non-Personal Information is included in the <i>Privacy Notice</i> and states: "[PG&E] may also include data about [customers] electric and gas usage in a group of other usage data so it becomes anonymous and cannot identify [the customer] personally." The Notice further states that the data group could be used to provide a summary of total energy usage for all homes and businesses in a certain geographic area or climate zone. PG&E notifies customers that the energy usage data is used to manage, provide, and improve their services and business operations. In addition, this non-customer specific Energy Usage Data may be shared with other entities for the purpose of performing activities that may help improve programs such as Energy Efficiency and Demand Response, or to inform California energy policy as directed by the CPUC. 1.b. Reviewed internal <i>CES Data Request Standard</i> procedural documentation and noted that PG&E has adopted the <i>CPUC Data Aggregation Standards</i> in Decision 14-05-016, which include the option to provide aggregated data for the purpose of improving programs such energy efficiency among others.		

Assessment procedures	Assessment test results	Exceptions
2. Assess whether PG&E has a procedure in place to help ensure aggregate information does not disclose or reveal specific Covered Information.	2.a. Met with members of the Customer Privacy team and was informed that there are data aggregation rules in place and are reviewed by the Privacy Team. 2.b. Reviewed internal <i>CES Data Request Standard</i> procedural documentation and noted that PG&E has adopted the <i>CPUC Data Aggregation Standards</i> in Decision 14-05-016. The Standard states the requirements to ensure the data is aggregated according to the <i>CPUC Data Aggregation Standards</i> for residential customers and industrial, agricultural, and commercial customers. The requirements to aggregate residential customer information are as follows: - All information that might be used to identify a specific customer is stripped out of the data - Location information is aggregated to at least the five-digit zip code level - There are at least 100 customers in every zip code - Data is aggregated to at least the monthly level In addition, the Standard states the requirements to ensure the data is anonymous according to the <i>CPUC Data Anonymization Standards</i>, which include the following: - Data is stripped of all personally identifiable information PII and randomized - Unique Unidentifiable IDs (UUIDs) are used as identifiers - Data is made up of at least 100 customers for each customer class - Customer classes are not mixed - No single customer's load exceeds 10 percent of the total usage in each customer class - Usage data is aggregated to at least the monthly level	

CPUC RULE 7 Data quality and integrity

Overall assessment result		Exception noted: A comprehensive inventory of systems containing Covered Information was not maintained during the course of the Covered Period. PG&E remediated this Exception prior to the finalization of the assessment report. PG&E has taken actions to correct this issue by updating the inventory of systems containing Covered Information.	
CPUC Rule 7	Rule description	Covered entities shall ensure that Covered Information they collect, store, use, and disclose is reasonably accurate and complete or otherwise compliant with applicable rules and tariffs regarding the quality of energy usage data.	
Assessment procedures		Assessment test results	Exceptions
1. Assess whether PG&E's privacy policies address the quality of Covered Information and other Customer PII.		1.a. Reviewed the <i>Information Classification and Protection Standard</i> and noted it instructs employees that PG&E records must be managed with integrity to ensure authenticity and reliability. In addition, it states that each Line of Business is responsible for ensuring records are complete, accurate, and verifiable. 1.b. Reviewed the <i>Enterprise Data Management Policy</i> and noted that one of the principal tenants of the Enterprise Data Management program is "Data Quality Continuous Improvement." 1.c. Reviewed <i>Employee Code of Conduct</i> and noted it states: "Accurate records are an essential part of PG&E's operations. To keep our system safe and reliable, we must always complete and document our work. Each employee creates records and information and is responsible for managing PG&E records and information to ensure that it is safe, reliable, retrievable, compliant and available during its life cycle." 1.d. Reviewed <i>Supplier Code of Conduct</i> and noted that third parties are required to maintain accurate records and disclosures. The Code indicates that: "Supplier shall ensure that facts are never misstated or material information omitted to PG&E, and that all records, disclosures and communications to PG&E are full, fair, accurate, timely, and understandable. The true nature of any transaction shall never be hidden, altered, falsified or disguised, nor any endorsements, approvals, or authorizing signatures for any payment forged. Records or disclosures	

Assessment procedures	Assessment test results	Exceptions
	known to be false or misleading shall not be submitted, entered, processes, or approved and shall be reported to supplier's PG&E business contact." 1.e. Reviewed <i>User Responsibilities Standard</i> and noted that it includes a specific note on integrity of data: "To ensure the security of the PG&E network, the integrity of the PG&E network systems and data...only PG&E owned computers and mobile devices may be physically connected to a PG&E network..."	
2. Inspect sample communication to customers to assess whether PG&E policies include customer data integrity.	2.a. Reviewed the <i>Privacy Policy</i> and noted it addresses customer's responsibility to provide complete, accurate, and up-to-date information. 2.b. Reviewed the <i>Privacy Notice</i> and noted that it addresses the customer's responsibility to provide PG&E with complete, accurate and up-to-date information. It also prompts customers to update or correct their information by signing into their online account through the Your Account portal at pge.com or to contact PG&E at: - Telephone: 1-800-743-5000 - Email: pgeprivacy@pge.com - Web: https://www.pge.com/en_US/small-medium-business/business-resource-center/pge-forms/business-customer-service-center/page - Mail: PG&E Residential and Business Customer Service, Correspondence Management Center, Attention: Customer Privacy Management, PO Box 997310, Sacramento, CA 95899-7310. 2.c. Reviewed PG&E <i>Website Terms of Use</i>, publicly available on pge.com, and noted it includes a User Account section, which states that by opening a User Account, the Customer is agreeing to provide accurate and complete information and to update the information as necessary so that it remains accurate and complete. 2.d. Observed screenshots of each step involved in registering for an online PG&E User Account and noted that customers must click a check box acknowledging that they have read the <i>Terms of Use</i>, which states that	

Assessment procedures	Assessment test results	Exceptions
	customer agrees to provide accurate and complete information and to update information as necessary so it remains accurate and complete.	
3. Assess whether procedures are in place that: — edit and validate personal information as it is collected, created, maintained, and updated, — specify when the personal information is no longer valid.	3.a. Reviewed the <i>Customer Privacy Standard</i> and noted PG&E should collect, store, use, and disclose only as much Customer Information as is required to perform business processes. 3.b. Met with the Privacy Team and noted that a customer is able to make changes or updates to information online. In addition, the Team has been taking steps to have customers proactively update their information. For example, a bill insert went out in June, July and August of 2020 to remind customers to update their contact information. The annual bill insert also includes a note to customers on the importance of updating their information if they believe it is inaccurate and provides a phone number and email address where customers can reach out for assistance. 3.c. Reviewed <i>Enterprise Records and Information Management Standard</i> available to all employees and noted Enterprise Records and Information Management's objectives include facilitating the creation of records that are accurate, complete and verifiable and to systematically retain records for only as long as necessary. The policy also indicates to dispose of records in accordance with applicable retention schedules. 3.d. Met with a sample of CSRs, which included CSRs located in the Contact Centers, as well as remote workers. KPMG notes these CSRs represent various levels and different specializations CSRs may have to assist various types of customers. We were informed that CSRs can assist customers with updating or correcting their information. In addition, CSRs also inform the customer that changes and updates can be made through their online account.	
4. Inspect sample evidence to assess whether procedures are in place to safeguard personal information is sufficiently relevant for the purposes for	4.a. See CPUC Rules 3b and 5b test results 4.b. Met with Director, Enterprise Information Governance, and was informed that, no records containing Covered Information were purged in 2020.	A comprehensive inventory of systems containing Covered Information was not maintained during the

Assessment procedures	Assessment test results	Exceptions
which it is to be used and to minimize the possibility that inappropriate information is used to make business decisions about the individual.	4.c. Reviewed the <i>Customer Privacy Standard</i> and noted PG&E informs its employees to limit the amount of PI collected, accessed, used, and stored to only what is required to perform documented business processes. The documented notes that if Personal Information is no longer needed for a documented business purpose and when it is no longer required to be retained under the Enterprise Records Information Management process, then it should be disposed of properly as outlined in internal policies. 4.d. Reviewed the <i>Information Classification User Guide</i> and noted that Customer Information is considered either Restricted and/or Confidential and the employees are informed that these classifications of data are to be securely stored and destroyed according to the <i>Records Management Standard</i>. 4.e. Met with Billing Operation team members, and was informed that billing exceptions, such as inaccurate or incomplete information, typically are reported to the Customer Contact Center by customers to resolve. In addition, we were informed that manual reviews of customer bills are conducted if an account exceeds its typical threshold or if it appears the meter read is not in line with estimates. A manual review triggers steps to validate the usage, which can include a review of the SmartMeter data or a new manual meter read. Billing Operations Support employees review and resolve errors and exceptions to help ensure bills are submitted correctly. Throughout this process, employees are encouraged to practice data minimization and to only access the information that is needed to resolve the issue. 4.f. Reviewed the list of systems containing Covered Information and the associated system profiles documenting system safeguards. During the course of the audit, additional Covered Information systems used by business teams were identified that were not included in the inventory.	course of the Covered Period. PG&E remediated this Exception prior to the finalization of the assessment report. PG&E has taken actions to correct this issue by updating the inventory of systems containing Covered Information.

CPUC RULE 8 Data Security

Overall assessment result		Exception Noted:	
		— Current PG&E system authentication requirements for setting up a network password do not ensure that the password chosen meets all complexity requirements outlined in the Appendix A of the <i>System Authentication Requirements Standard</i> . PG&E remediated this Exception prior to the finalization of the assessment report by updating the <i>System Authentication Requirements Standard</i> to align with technical capabilities.	
		— Although mechanisms are in place to prevent the exfiltration of data and files between the virtual workstation and an external environment, a user is able to map to a local printer and print files from the virtual desktop environment. PG&E remediated this Exception prior to the finalization of the assessment report by taking actions to correct this issue by implementing configuration changes, which prevents a user from mapping to local printers and print from within the virtual desktop environment.	
		— Although PG&E currently maintains a 30-minute session timeout for its remote desktop access, it was possible to access the remote desktop without reinputting credentials and relaunching the VDI workspace receiver after 30 minutes of inactivity.	
CPUC Rule	Rule description	Generally:	
a		Covered entities shall implement reasonable administrative, technical, and physical safeguards to protect Covered Information from unauthorized access, destruction, use, modification, or disclosure.	
Assessment procedures		Assessment test results	Exceptions
1. Assess whether PG&E has documented policies addressing security provisions for Covered Information: — Risk assessment and treatment — Security policy — Organization of information Security		1.a. Met with Senior Director, Cybersecurity, and noted that PG&E Cybersecurity departments had adopted NIST Cybersecurity framework and updated PG&E Cybersecurity mission, vision, and strategic objectives. Per inquiry of relevant stakeholders and inspection of documentation provided, it was noted that the following policies/procedures/standards/guidelines are in place to address security provisions for PG&E, including Covered Information: - Risk Assessment and Treatment - Per inspection of the <i>Enterprise and Operational Risk Management Procedure</i>, it was noted that instructions for completing a risk assessment,	

Assessment procedures	Assessment test results	Exceptions
— Asset management — Human resources security — Physical and environmental security — Communications and operations management — Access control — Information systems acquisition, development, and maintenance — Information security incident management — Business continuity management — Compliance	developing a risk response strategy, and monitoring and reporting risk status and metrics are formally documented. Risk assessments, as outlined in the Procedure, are to be conducted by the Risk Manager appointed by each LOB, as noted in the <i>Enterprise and Operational Risk Management Standard</i>. All Risk Management activities are required to be entered into and tracked manually. PG&E is in the process of implementing a Governance, Risk & Compliance (GRC) platform to automate the process. Met with Manager, Cybersecurity, and noted that Vulnerability Assessment scans and control monitoring in place for all CEUD systems and the vulnerability management reports are issued regularly. - Security Policy - The <i>Physical Security Standard, IT Governance Policy and IT & Security Complied Program Standard</i> is in place and published on the PG&E@Work intranet site, accessible to all PG&E employees. Additional supporting information security policies (e.g., user responsibilities, information classification, and protection), standards, procedures, and guidelines are also published on the PG&E@Work site. - Information Security Organization - A formal Cybersecurity organization in place to perform governance activities and adhere to standards, headed by the Director of Cybersecurity. The Cybersecurity program is aligned to the National Institute of Standards and Technology (NIST) cybersecurity framework (CSF). The program is established to drive cybersecurity strategy, direction, and framework across the organization based on industry best practices and regulatory critical infrastructure guidelines. The Cybersecurity program elements include: GRC, third-party risk, data asset management, Identity Access Management, infrastructure security, logging monitoring & incident response, Threat Vulnerability Management, and security awareness & training. - Asset Management - Per inspection of the <i>IT Asset Management Standard</i> and <i>IT Asset Decommission and Re-Use Standard</i>, it was noted that all computing assets must be assigned an owner.	

Assessment procedures	Assessment test results	Exceptions
	Asset owners are responsible for implementing and monitoring security and maintenance controls around their assigned assets. It was noted that all assets must be inspected by IT for data retention requirements before being disposed of. Per inspection of the <i>Asset Management, IT Asset Decommission and Re-Use Procedure</i>, it was noted that procedures to determine if assets are to be disposed or re-used are clearly outlined. - Human Resources Security - PG&E documents the requirement to perform background checks on all external candidates before hiring in the <i>Pre-employment Background Screening Program Standard</i>. - Physical and Environmental Security - Physical and environmental security requirements are formally documented in the <i>Physical Security Program Standard</i> document and environmental safeguards were confirmed during virtual site walkthroughs. - Communications and Operations Management - Encryption requirements are formally documented in the <i>Cryptographic Controls Standard</i>. Remote access encryption requirements are formally documented in the <i>Identity and Access Management Standard</i>. Requirements for managing email communications are formally documented in the <i>Email Management Standard</i>. Conduct expectations for personnel engaging in social media activity that relates in any way to PG&E are formally documented in the <i>Employee Social Media Standard</i>. Network security requirements are formally documented in the <i>Firewall Standard</i>. - Access Control - Access Control requirements are formally documented in the <i>Identity and Access Management Standard</i> and the <i>User Responsibilities Standard</i>. - Information Systems Acquisition, Development, and Maintenance - The information systems acquisition, development, and maintenance process are formally documented in the <i>IT PMO Phase Gate Review Procedure</i>, which visually represents the phase gate review process	

Assessment procedures	Assessment test results	Exceptions
	followed by PG&E, and lists appropriate governing bodies to be involved at various points in the lifecycle. - Information Security Incident Management - Cybersecurity Incident Management are formally documented in the <i>Customer Information Data Loss Event Standard</i>, as well as in the <i>Customer Privacy Data Loss Event Procedure</i>, and the <i>Customer Information Data Loss Event Response Procedure</i>. Additionally, noted that a <i>Cybersecurity Emergency Response Plan and Data Breach Playbook</i> is maintained. - Business Continuity Management - Business Continuity Management requirement are formally documented in the <i>Information Technology Disaster Recovery Standard</i>, as well as the <i>Business Continuity Planning, Training, and Exercise & Improvement Planning Standard</i>. - Compliance - The requirements for compliance with applicable privacy legislation and regulations are formally documented in the <i>Customer Privacy Standard</i>.	
2. Assess whether PG&E privacy policies and procedures cover protection of electronic and print media containing Covered Information from unauthorized access, destruction, use modification or disclosure.	2.a. Inspected the <i>Information Classification and Protection Standard</i> and noted that per "Section 2: Information Classification" and the <i>Information Classification User Guide</i> sections A and C, Covered Information is classified as Restricted. 2.b. Inspected the <i>Information Classification and Protection Standard</i> and noted that per "Section 4: Information Protection," electronic and print media containing Covered Information is subject to specific policies to protect it from unauthorized access, destruction, use modification, or disclosure. 2.c. It was noted that although mechanisms are in place to prevent the exfiltration of data and files between the virtual desktop and an external environment, a remote access user via the virtual desktop was able to map to a local printer and print files. 2.d. See CPUC Rule 8a(8) for further details.	Although mechanisms are in place to prevent the exfiltration of data and files between the virtual workstation and an external environment, a user is able to map to a local printer and print files from the virtual desktop environment. PG&E remediated this Exception prior to the finalization of the assessment report by taken actions to

Assessment procedures	Assessment test results	Exceptions
		correct this issue by implementing configuration changes, which prevents a user from mapping to local printers and print from within the virtual desktop environment.
3. Assess whether a management procedure exists to monitor compliance with the security provisions in the policy and instances of noncompliance are identified and remediated.	3.a. Inspected the <i>Enterprise and Operational Risk Management Standard</i> and noted that the guidelines for monitoring compliance of security provisions are documented. 3.b. Met with Manager, Cybersecurity, and Analyst, Digital Forensic and noted that there are technical controls and procedures in place to monitor attempted exfiltration of Covered Information through risk assessments, vulnerability scans, data loss prevention (DLP), and end-point protection tools. The team maintains procedures to remediate identified instances of non-compliance.	
4. Review evidence of PG&E providing customers with the Privacy Notice on the security mechanisms used by PG&E to protect their Covered Information.	4.a. Inspected the <i>Privacy Notice</i> that is available on <i>pge.com</i> and noted that it addresses the security mechanisms used by PG&E to protect Covered Information. 4.b. Inspected the PG&E <i>Privacy Notice</i> and noted that it addresses PG&E's approach to securing the Covered Information provided by customers. 4.c. Per the inquiry of Director, Risk, Compliance, Audit & Privacy, the <i>Privacy Notice</i> containing references to the security mechanisms used by PG&E to protect Covered Information is provided in the customer welcome package and inserted in the annual bill.	
5. Review evidence that PG&E's policies on Data Security are communicated to internal employees and contractors who have access to Covered Information.	5.a. Inspected the <i>Customer Privacy Standard</i> and noted that it is published on the PG&E intranet site, which is accessible by all PG&E employees and contractors with network access credentials, and that it provides guidance on the data privacy policy for PG&E. 5.b. Inspected the <i>User Responsibilities Standard</i> and noted that it is published on the PG&E intranet site, which is accessible to all PG&E	

Assessment procedures	Assessment test results	Exceptions
	employees and contractors with network access credentials, and that it provides guidance on the responsibilities for protecting PG&E data for all employees, non-employee workers, vendors, temporary personnel, and other outside personnel. 5.c. Inspected the security requirements and guidance published on the PG&E intranet site for <i>Working Securely from Home and Printing from Home Exception Procedure</i> and noted that the security needs while working from home were included in the awareness campaigns. 5.d. Inspected the <i>Information Classification and Protection Standard</i> and noted that data protection requirements are communicated via targeted awareness campaigns. 5.e. Inspected confidentiality and non-disclosure clauses in the <i>General Terms and Conditions Templates</i> most frequently used by PG&E for engaging with third parties with Covered Information access. These <i>General Terms and Conditions Templates</i> contain confidentiality clauses governing the handling of customer information. Specifically, the templates contain a definition of confidential information and states that the information shall only be used for the purposes that were agreed upon between PG&E and the third party, and specifies that the information shall be kept confidential and the third party shall not disclose the confidential information to any other parties. It also includes an exhibit titled "Confidentiality and Data Security," which provides further detail for how PG&E data and confidential information are required to be handled. This exhibit includes a clause requiring the contractor and its employees to sign a "<i>Non-disclosure and Use of Information Agreement</i>" prior to commencement of work. 5.f. Inspected PG&E's trainings, awareness programs, and communications sent to employees with access to Covered Information and noted that Cybersecurity and Privacy Compliance teams reinforce Data Security through various online trainings and awareness campaigns, and employee compliance with relevant policies and procedures is routinely reviewed.	
6. Assess whether a management procedure is in place to monitor	6.a. Met with Senior Director, Cybersecurity, and noted that a Technology and Cybersecurity Committee had been established. The Committee is	

Assessment procedures	Assessment test results	Exceptions
whether PG&E manages its security program to help ensure the protection of Covered Information.	provided an update on identified risk (cyber-attach, data loss) and the mitigation efforts. The committee is presented with a <i>Cybersecurity Workplan</i>, which includes an update on cyber-attacks and threat briefings, results of Cyber maturity assessments, and annual exercise findings. A quarterly report is issued to the board on high-risk findings and progress. 6.b. Met with IT Program Management Lead and Senior Manager, Cybersecurity & Risk Management, and noted that program managers contact the Cyber Team at the beginning of new system development and major upgrade. Noted that the program managers are required to maintain a <i>System Security Plan</i>. 6.c. Inspected the SSP used to assess the compliance of a system with Cybersecurity and Privacy policies and standards and for making management decisions on security, privacy, and risk. Formal approvals from Cyber and Privacy teams are required to allow production release. If a project did not incorporate the necessary cybersecurity functionality, a risk remediation/acceptance is documented and sent to the LOB director/VP for acceptance based on high/low classification. The risk exceptions are presented to the Cybersecurity governance team for review and approvals. 6.d. Met with Principle, Data Security Management, and noted that the development, QA, and test environments are reviewed as part of risk assessment. The Data Security team is responsible for ensuring that the production data is not allowed for use in lower environment. Also, noted that the Data Security team is focusing efforts to reduce the data footprint. 6.e. Met with Senior Manager, Cybersecurity & Risk Management, and noted that current security standards do not require all systems containing Covered Information to routinely undergo security risk assessments unless they are subject to a major upgrade or enhancement. 6.f. Inspected the <i>Risk Management Policy and Standard</i> and noted that it does not mandate ongoing risk assessment requirements. PG&E currently conducts Vulnerability Assessment scans and control monitoring for all CEUD systems. However, a full-blown risk assessment	

Assessment procedures	Assessment test results	Exceptions
	had not been performed on all CEUD systems since the last review period. 6.g. Met with Manager Vulnerability Management and Senior Manager, Cybersecurity & Risk Management, and reviewed vulnerability scan report. It was noted that the cloud environment is set up for daily vulnerability scans, and the non-cloud environment takes a week to complete the scan. Noted that vulnerability management reports are issued regularly. Monthly <i>Vulnerability Management Status Reports</i> are issued to leadership team for the review, it includes a description of Average Vulnerability Age and Common Vulnerability Scoring System score. The <i>Vulnerability Scan Reports</i> are issued to system owners, and weekly reports are issued to the entire system owner population. 6.h. Per inquiry of Director Cybersecurity, Security Inelegance and Operations, and Director, Security Intelligence and Operations Center (SIOC), and noted that procedures are in place for conducting Penetration Testing (PT). 6.i. Noted that Pre--deployment and post-deployment PT scans are performed based on inputs from Cybersecurity Analysts (CSAs) and Advanced Penetration Testing is performed on a quarterly basis. Inspected the annual PT test schedule, PT reports with findings and associate scanning/re-testing reports. Reviewed quarterly red-team assessment report and noted that the assessments are focused on external-facing applications like PGE.com. 6.j. Noted initiative for threat hunting, static, and dynamic testing, source code scanning is implemented.	
7. Review PG&E's relevant policies to assess if PG&E incorporates security into their SDLC.	7.a. Inspected the <i>Software Security Standard</i> and noted that all software development must comply with secure coding principles and practices at various stages of the SDLC. The requirements include secure coding, development and testing practices, security architecture design, and vulnerability management. 7.b. The <i>System Security Plan</i> (SSP) is maintained to assess security controls for systems undergoing major upgrades or enhancement. The SSP is	

Assessment procedures	Assessment test results	Exceptions
	based on PG&E policies and procedures and compliance requirements i.e., NIST, CEUD requirement, NERC CIP, NRC, CCPA, and HIPPA. 7.c. Met with Manager, Cybersecurity Solutions, Principle Program Management Lead, and few others from application/web development teams, and noted that before a production release, Project Management Office (PMO) team reviews SSP documentation and necessary approvals from Cybersecurity and privacy teams. The PMO team follows a formal checklist process, which includes a Cybersecurity review. 7.d. Inspected evidence of application <i>System Security Package</i> reports and noted that security is incorporated into the SDLC. Noted that the <i>System Security Package</i> documentation and reviews (cyber and privacy review, risk acceptance, exceptions) are maintained in GRC system.	
8. Assess whether PG&E uses appropriate facility entry controls to limit and monitor physical access to systems and locations where Covered Information is processed and stored.	8.a. Per inspection of the supporting documents and inquiry of relevant stakeholders and virtual site walkthrough of Data Center, Customer Contact Center, and Billing Center, it was noted that the physical access controls are in place to protect Covered Information. 8.b. Inquired of Customer Service Representative, during a virtual site visit and noted the following controls around Covered Information: - Security guards are onsite 24/7 - Access is controlled by badge access readers - Visitor sign-in and escort is required - Clean desk/clear screen policy - Covered Information is locked in cabinets when not in use or at the end of shifts - Office printer requires individuals to select LAN ID at the printer to complete print job - Shredders are located at each printer in the facility as well as shred bins for larger files	

Assessment procedures	Assessment test results	Exceptions
	8.c. Inquired of the Manager, Data Center Facilities, during a virtual site visit and noted following physical controls were observed for restricted areas: - No external signage - Access Control readers at entrances to premises, and restricted areas - Man traps - Visitor sign-in and escort requirement - Video monitoring installed throughout the facility - Exit alarms installed on exit-only doors 8.d. Inspected the <i>Physical and Electronic Records Disposition Procedure</i> and noted that it provides a detailed process for the review and approval of disposition eligible records.	
9. Assess whether PG&E has implemented procedures for protecting Covered Information including controls for physically securing all media.	9.a. Inquired of Data Center Facilities Manager, during a virtual site visit and noted that server racks processing Covered Information are locked all the time and monitored with security cameras. 9.b. Inspected the <i>Information Classification Protection Standard</i> and noted that the standard formally documents the responsibility of all personnel for protecting information consistent with its designated classification, and all applicable laws and company standards related to the protection of information. 9.c. Inspected the <i>User Responsibilities Standard</i> and noted that the standard specifically outlines user requirements for actions that must be taken by any user to protect information and technology assets, including physically securing and encrypting media. 9.d. Inspected the <i>Information Classification User Guide</i> and noted that there is a formal guide around protecting, distributing, storing, and/or secure disposal of covered information whether it is in print or electronic form. 9.e. Inspected the <i>Approved Storage Options and Guidance</i> on using approved removable media. 9.f. See CPUC Rule 8a(8) for further details	

Assessment procedures	Assessment test results	Exceptions
10. Inspect whether physical records containing Covered Information are stored in locked cabinets or rooms restricting unauthorized access.	10.a. See CPUC Rule 8a(8) for test results	
11. Inquire of PG&E's personnel to gain an understanding of the logical control procedures in place to prevent unauthorized access to Covered Information.	11.a. Inquired of system owners and noted that access requests must be approved by system and information owners. Access accounts are provisioned based on a need-to-know and principle of least privilege. User access accounts are reviewed on a periodic basis. Privileged user account credentials are assigned differently from those used for normal business.	
12. Inspect evidence that logical controls are in place to prevent unauthorized access to Covered Information including user access provisioning and deprovisioning.	12.a. Inspected the <i>Identity and Access Management Standard</i> and noted that formal procedures are in place to help ensure authorized access and prevent unauthorized access. 12.b. Inspected the <i>System Authentication Requirements Standards</i>, it includes requirements for minimum password length, complexity, expiration times, password history, account lockout, and lockout durations. Noted that the multi-factor authentication is required for externally accessible restricted customer data. 12.c. Inspected the <i>Remote Access Standard</i> and noted that formal procedures and technical requirements are in place to help ensure secured remote access. 12.d. Noted that PG&E internal system manages the centralized Identity and Access Governance. This internal system is updated on a nightly basis. When users are terminated in SAP (upon employment termination), their electronic access is noted for update in access management system and access is revoked in a nightly run. 12.e. Inquired of CSR's during Contact Center virtual walkthrough and noted that the customer calls with CSRs are monitored and recorded. CSRs are not allowed to write any customer information down, and cell phones are prohibited from being present or used in the work area.	Current PG&E system authentication requirements for setting up a network password do not ensure that the password chosen meets all complexity requirements outlined in the Appendix A of the <i>System Authentication Requirements Standard</i> . PG&E remediated this Exception prior to the finalization of the assessment report by updating the <i>System Authentication Requirements Standard</i> to align with technical capabilities.

Assessment procedures	Assessment test results	Exceptions
13. Review PG&E's relevant policies to assess if physical controls are in place protecting Covered Information.	13.a. Inspected the <i>Physical Security Program Standard</i> and noted that controls around the physical protection of Covered Information are documented and in place, including responsibility for granting and controlling access and continuous monitoring of physical security perimeter controls. 13.b. Inspected the <i>Visitor-Escort Access Control Standard</i> and noted that the standard establishes roles for involved parties in a situation where visitor access is granted, responsibilities for those involved parties, and requirements specific to the visitation of NERC sites. 13.c. Inspected the <i>Enterprise Records and Information Management (ERIM) Standard</i> and noted that the Operations group within ERIM is responsible for managing physical records storage, including records with Covered Information. This includes maintaining a chain of custody and taking appropriate security and fire-retardant measures. 13.d. Validated through virtual site walkthrough of sites that store Covered Information that the physical access controls were consistent with Physical Security Policies in place. 13.e. Validated through virtual site walkthrough of the print bills facility and noted that the print operators could not see the covered information during bill printing and inserting.	
14. Inquire of PG&E's personnel to gain an understanding of the controls protecting physical access to systems storing Covered Information.	14.a. Inquired of the Manager, Data Center Facility, and performed a virtual site visit of the Data Center facility and observed the following physical security controls: - Noted that the access to the server room is restricted and maintained by the My Electronic Access system - Noted that the access for employees and contractors with continues access to restricted areas/NERC sites are required to undergo annual NERC training and personal risk assessment background checks. The NERC CIP access requirements are formally documented in <i>Visitor-Escort and Employee Access Controls Standard</i>. - Noted that the contractors with unescorted access to restricted areas/NERC sites are required to undergo the NERC access provisioning process	

Assessment procedures	Assessment test results	Exceptions
	- See CPUC Rule 8c(8) for further details	
15. Inspect evidence that physical access to sites and systems storing Covered Information is monitored and restricted.	15.a. See CPUC Rule 8a(14) for test results	
16. Review PG&E's relevant policies to assess if environmental controls are in place.	16.a. See CPUC Rule 8a – 8c(8) for test results 16.b. Inspected the <i>Corporate Security Site Audit Walkthrough</i> template developed to assess environmental controls. This audit program was developed in 2020, and the initial pilot was conducted in Q4. The site assessment program to audit Credit and Billing Centers and Contract Centers was rolled out outside the in-scope audit period.	
17. Inquire of PG&E's personnel to gain an understanding of the environmental controls to protect systems storing Covered Information from natural disasters and environmental disasters (such as fire or flooding).	17.a. See CPUC Rule 8a(8) for further details 17.b. Inquired of the Manager, Data Center Facilities, during a virtual site visit and noted that the Data Center Facility has the appropriate environmental controls in place. 17.c. Inspected the <i>Generator Preventive Maintenance Procedures</i> and <i>FF/OC Maintenance logs</i> and noted that the PG&E team performs monthly, quarterly, and annual preventive maintenance testing of the backup power equipment. 17.d. Inspected the <i>Earthquake Playbook</i> and noted that there are formal procedures in place to respond to an earthquake.	
18. Assess whether PG&E has the ability to transfer data to third parties using secure channels.	18.a. Per inquiry with Manager, Vendor Risk Management, and Supervisor, Third-Party Security, it was noted that Manual Paper Risk Review Process is required to be completed as part of new vendor approval process, the vendor is required to complete Qualifying Privacy Impact Assessment (PIA) if they have access to any customer or employee information. The PIA process assesses the vendor controls for secure data transfer. 18.b. Per inquiry with Senior Manager Business Technology, and review of the <i>Enterprise Secure File Transfer System (ESFT) Profile</i> , it was noted that the Managed File Transfer system is used to support ESFT file transfers within PG&E, and between PG&E and its third parties. The ESFT is	

Assessment procedures	Assessment test results	Exceptions
	configured to provide/support HTTPS/FTPS/SFTP protocols for secured authentication methods. Noted that there are alternative methods offered for data transfer based on size, i.e., secure email, email encryption. 18.c. Per inquiry with Manager, Cybersecurity, and Analyst, Digital Forensic, noted that the DLP tool is implemented to detect data leakage and exfiltration attempts of Covered Information. 18.d. Inspected the <i>Third Parties Data Transfer Procedures</i> and noted that there are guidelines for sending confidential information to third parties. 18.e. Inspected the <i>Third-Party Compromise Playbook</i> and noted that incident response procedures are documented.	
19. Assess whether PG&E has deployed an automated tool on network perimeters that monitors for Customer PII, keywords, and other document characteristics to discover unauthorized attempts to exfiltrate data across network boundaries and block such transfers while alerting information security personnel.	19.a. Per inquiry with Manager, Cybersecurity, and Analyst, Digital Forensic, there are controls in place to monitor and prevent attempts to exfiltrate data across the network boundaries: - DLP tool is implemented to detect data leakage and exfiltration attempts of Covered Information across the network boundaries. - Office 365 DLP policy is enabled with data match capabilities and search for specific types of sensitive data. - Tool enables to limit SaaS application related data loss events. 19.b. The DLP tool is configured to detect and log data exfiltration attempts. The tool is not configured to block data exfiltration, but does send notifications. 19.c. Observed that the DLP tool is configured to flag instances of unauthorized data exfiltration across the network. Once flagged, a DLP Analyst will review the incident and determine if it is a true positive. If a true positive is found, the incident is escalated to the appropriate departments. Any follow-up actions that may be needed are determined by Cybersecurity team. 19.d. Per inquiry with Manager, Cybersecurity, noted that all data exfiltration attempts are logged in the DLP tool logging database. 19.e. Per inquiry with Manager, Cybersecurity, noted that DLP agents are installed on all workstations and cannot be disabled by end-users and a daily health check is in place to validate the DLP agent health.	See CPUC Rule 8a(2) for further details

Assessment procedures	Assessment test results	Exceptions
	19.f. Per inquiry with Manager, Cybersecurity, noted that MDM (mobile device management) tool is implemented to manages mobile data leakage. 19.g. Inspected the <i>Customer Data Loss Event Standard</i> and procedures and noted that process is in place to report and investigate potential data loss events 19.h. See CPUC Rule 8a(2) for further details	
20. Assess whether PG&E has deployed an automated tool on workstations that monitors for Customer PII, keywords, and other document characteristics to discover unauthorized attempts to exfiltrate data to removable media and block such transfers while alerting information security personnel.	20.a. See CPUC Rule 8a(19) for test results	
21. Assess whether PG&E has controls in place so that users cannot disable and modify security products or services.	21.a. Inspected the <i>User Responsibilities Standard</i>, "Section 9: Security Controls" and noted that there are policies in place prohibiting users from circumventing or disabling any technology asset security controls or configurations and from preventing automated updates or scans. 21.b. Inspected the <i>PGE Security Assigned Controls Template</i> and noted that per <i>CSF control PR.DS-6</i> on the "Assign Controls" workbook tab, PG&E employs integrity verification tools to detect unauthorized changes to software, firmware, and information. 21.c. Met with Manager, Security Intelligence & Operations Center and Analyst, Digital Forensic and noted that the DLP Agent and Anti-Virus agents are installed on every workstation, and a daily health check is reported on the agent's health. It was noted that users do not have administrative access to disable or modify agents on workstations.	
22. Assess whether PG&E officials understand the current threat landscape and potential threats	22.a. Per inquiry of Director, SIOC, it was noted that threat management is a continuous process that is performed using a combination of tools and procedures. PG&E leverages an intelligence-driven defense model for	

Assessment procedures	Assessment test results	Exceptions
to the organization by leveraging multiple threat feeds.	threat management. PG&E maintains an expanded intelligence team to handle advance persistent threat attacks and act on actionable intelligence alerts. 22.b. Inspected the <i>Cybersecurity Threat Briefing Report</i> provided to Safety and Nuclear Oversight Committees and noted that cybersecurity-related enterprise risk topics and current threats facing PG&E are presented for discussion. 22.c. Inspected the <i>Cybersecurity Emergency Response Plan Annex Section 2</i> and noted that PG&E has a five-level rating system for cybersecurity events and incidents, increasing in level the more severe the incident (from level 1 up to level 5). 22.d. Inspected the <i>Monitoring and Measurements Standard</i> and noted that PG&E has established and maintains a compliance monitoring and audit program. 22.e. Noted that threat intelligence management tool is used for security events monitoring, orchestration, automation, and response. Analysts monitor the system continuously and address all items based on priority. Analysts triage the incidents based on information available to them, using detailed playbooks. If an analyst is unable to handle an incident based on their skill and the resources available, the event will be escalated until it is addressed. 22.f. Per inquiry of Principal, Data Security, the Data Security function is in the process of maturing its process to analyze data in the lower environments based on data sensitivity types in an effort to reduce CEUD data footprint, data scanning initiatives are in place to scan all databases to discover any data that is lacking security controls. 22.g. Indicators of compromise are fed into a threat intelligence tool. Upon upload of indicators, the platform will examine all events for these indicators, including past events, to retroactively find compromises that may not have been found previously. 22.h. Inspected the <i>Third-Party Compromise Playbook</i> and noted that incident response procedures are documented. 22.i. Met with Director Cybersecurity, Security Inelegance and Operations, and Manager, Cybersecurity Monitoring and Response, and noted that	

Assessment procedures	Assessment test results	Exceptions
	procedures are in place for conducting Penetration Testing (PT). Pre-deployment and post-deployment PT scans are performed based on inputs from CSAs. Noted that Advanced Penetration Testing (APT) are performed on a quarterly basis. 22.j. Inspected <i>Annual PT Test Schedule</i> and <i>Test Reports</i> and noted that the findings and associate scanning/re-testing is documented. Quarterly red-team assessments are performed that are focused on external-facing applications, e.g., PGE.com. Noted initiative for threat hunting, static and dynamic testing, and source code scanning. 22.k. Met with Senior Manager, Cybersecurity & Risk Management and Manager, Vulnerability Management, and noted that procedures are in place for conducting continuous vulnerability scans on all assets. - Servers, network devices, and other asset categories are setup for scans, the enterprise scan takes a week to complete. - Vulnerability scanning tool is implemented to performed operation system (OS) based vulnerability scans on the non-cloud environment. - A cloud native security platform scans setup for OS-based vulnerability scans on the cloud environment. - Noted that PG&E is in the process of implementing continuous monitoring for Operational Technology (OT)/ Industrial control systems (ICS) devices.	
23. Assess whether PG&E scans source code for bugs and vulnerabilities before moving it into production.	23.a. Per inquiry of Principle Program Management Lead and Senior Manager, Cybersecurity & Risk Management, and noted that program managers contact the Cyber Team at the beginning of new system development and major upgrades. Noted that program managers are required to maintain System Security Plan for applications. Inspected the System Security Plan maintained to assess the compliance of a system with Cybersecurity and Privacy policies and standards and for making security, privacy, and risk management decisions. Noted that program managers are responsible for to maintaining SSP for the systems. The systems cannot be put into production without formal approval from the Cyber and Privacy teams.	

Assessment procedures	Assessment test results	Exceptions
24. Assess whether PG&E's development/test environments are separate from the production environment, with access control in place to enforce the separation.	23.b. Per inquiry of Director, SIOC and Manager, Cybersecurity Monitoring and Response, the CSA provide the requirements for performing a pre-deployment source code scan for bugs and vulnerabilities before moving the system into the production environment. It was noted that source code scanning tools are used.	
	23.c. Inspected the <i>Software Security Standard</i> and noted the secure coding practice requirement are outlined.	
	24.a. Inspected the <i>Software Security Standard</i> and noted that an explicit requirement is included in the standard for the separation of production environments (PROD, QA, or DR) from any development environment (Dev or Test).	
	24.b. Met with Principle, Data Security Management, and noted that the production environment is required to be isolated from all other environments. The data security team provides services for masking data to be used in lower environments.	
	24.c. Inspected the <i>Enterprise IT Change Management Standard</i> (ITCM) and noted the changes to the production environment and systems are required to comply with ITCM process and procedures and follow the approval process.	
25. Assess whether PG&E does not use Production Covered Information for testing or	24.d. Inspected the <i>Firewall Standard</i> and noted that an explicit requirement is included in the standard for the separation of Development and Quality Assurance network environments from Production and Operations data network (ODN) environments. The standard describes requirements regarding the management of both physical and virtual firewalls at PG&E. Noted that firewalls must be used to limit interactions between security zones, including networks, systems, services, and applications with different security requirements.	
	24.e. Noted in the <i>Firewall Standard</i> that the firewall access rules for all firewalls, including those separating environments, adhere to the principle of least privilege (Deny All policy).	
	25.a. See CPUC Rule 8a(24) for further details 25.b. Inspected the <i>PGE Security Assigned Controls Template</i> and noted that per CSF control <i>PR.DS-7</i> on the "Assign Controls" workbook tab, PG&E	

Assessment procedures	Assessment test results	Exceptions
development. Test data and accounts are removed before a production system becomes active.	employs requirements for maintaining a logical separation between operating environments development/test/quality assurance/production environment. 25.c. Met with Principle, Data Security Management, and noted that the production environment is required to be isolated from all other environments. Noted that the data security team provides services for masking data to be used in lower environments. Commencing in December 2020, the Data Security Team started using a data discovery tool to scan lower environments for sensitive data and adopted a risk-based approach to remove or scrub the identified sensitive data, including Covered Information. 25.d. Note that PG&E does not have expressly stated requirements incorporate standards to not use production data in non-production environments but requires appropriate protection of Covered Information in all cases. Inspected the <i>Information Classification and Protection Standard</i> and noted that there are protection standards in place based on information classification that must be adhered to, regardless of the location of that information in the network. Covered Information is classified as restricted and requires the highest level of protection when stored, accessed, disclosed, transported, or disposed.	
26. Assess whether PG&E utilizes a Data Masking tool to limit access to and protect Covered Information and other PII.	26.a. During virtual walkthroughs of the Customer Contact Center and Customer Service Center observed that PII is masked. Once the full sensitive number has been entered into the system, only the last four characters of that piece of information will remain visible to the agent, while the rest will be hashed out.	
27. Assess whether PG&E's web applications use encryption when transmitting sensitive data across the network.	27.a. Inspected the <i>Information and Classification Protection Standard</i> and noted that per "Section 4.8: Transport," all confidential and restricted information must be encrypted when moving between PG&E and third parties, as well as when being sent externally outside PG&E's network. 27.b. Inspected the <i>Identity and Access Management Standard</i> and noted that per "Section 3.2: Identity and Access Management System Configuration," for remote access connections to PG&E systems, remote	

Assessment procedures	Assessment test results	Exceptions
	session access must be over a connection encrypted with an approved encryption mechanism. 27.c. Inspected the <i>Third-Party Data Transfer Procedures</i> and noted that the standard provides specific protocol requirements for encrypting all company communications. 27.d. Inspected the <i>Email Encryption Requirement</i> and noted that it provides email encryption requirements for transmitting PG&E confidential and restricted information external to PG&E. 27.e. Inspected the <i>Cryptographic Controls Standard</i> and noted that the standard outlines the approved cryptographic control solutions that may be used at PG&E in Appendices A, B, and C. 27.f. Met with Senior Director, Cybersecurity, and noted that Cybersecurity team is consulted on security controls where data sharing requirement is in-scope. 27.g. Met with Senior Manager, Business Technology, and noted that the latest encryption standards are used for all file transfers in transit. Inspected CEUD system profiles and noted that applications encryption capabilities are documented as part of security controls.	
28. Assess whether PG&E has implemented an Intrusion Detection system within the environment to detect and generate log messages detailing events.	28.a. Inspected the <i>Firewall Standard</i> and noted that that PG&E employs firewalls that are capable of stateful protocol analysis and provide intrusion detection or prevention technology. 28.b. Met with Supervisor, Network Protecting Services, and Principal, Security Engineer SIOC, and confirmed that PG&E uses an Intrusion Prevention System (IPS)/Intrusion Detection System (IDS). The IPS/IDS is deployed at multiple points on the network via the Next-Generation Firewalls at both the network perimeter as well as at several points internally. Also noted that the Firewalls are configured for continuous updates of signature files that come directly from the equipment and service provider. The generated logs are sent to Information and Event Management (SIEM) tool. Alerts that get triggered are reviewed by the 24/7 SIOC.	
29. Assess whether PG&E has implemented an Intrusion	29.a. See CPUC Rule 8a(28) for test results	

Assessment procedures	Assessment test results	Exceptions
Prevention system within the environment to detect events and reject packets.		
30. Assess whether PG&E allows only limited access to network resource to vendors and third parties.	30.a. Inspected the <i>Remote Access Standard</i> and noted the requirement for authorized users of using company-provided remote access methods, such as Virtual Private Network (VPN) or the virtual desktop infrastructure and Multi-Factor Authentication for secure remote access to the User Defined Network (UDN) from third-party networks. Although PG&E currently maintains a 30-minute session timeout for its remote desktop access, it was possible to access the remote desktop without re-inputting credentials and relaunching the virtual workspace receiver after 30 minutes of inactivity. 30.b. Inspected the <i>Third-Party Security and Risk Management Standard</i> and noted per "Section 3: Assessment and Audit," the Third-Party Security and Risk Management team are required to perform assessments of third parties who will connect to PG&E's network, or collect, use, store, develop, create, or disclose sensitive PG&E information, per the <i>Information Classification and Protection Standard</i>. 30.c. Met with Manager, Vendor Risk Management, and Senior Manager, Cybersecurity & Risk Management, and noted that Third-Party Security Review is required to be completed by vendors before onboarding. 30.d. Inspected the <i>Third-Party Security and Risk management Standard</i> and noted per "Section 2: Initial Screening" that third-party security risk assessment is performed on all vendors prior to the vendor providing any services. The third party is assigned Tier rating based on risk profile, the risk ratings are based on PII, CPUC data, vendor connecting PG&E network. Inspected the <i>Third-party Security Review</i> (TSR) tracker and noted that vendor risk reviews are conducted periodically and at contract renewals. 30.e. Inspected the <i>Supplier Code of Conduct</i> and noted that all third parties requiring access to PG&E facilities or computing systems must complete the outlined requirements. The guidance for vendors and third parties with access to PG&E information systems is outlined in section – <i>Compute & System Security, Network & Premises Access Permission</i>.	Although PG&E currently maintains a 30-minute session timeout for its remote desktop access, it was possible to access the remote desktop without reinputting credentials and relaunching the VDI workspace receiver after 30 minutes of inactivity.

Assessment procedures	Assessment test results	Exceptions
	30.f. Inspected the <i>Information Classification and Protection Standard</i> and noted that per "Section 4.7: Access Control," restricted information may not be disclosed to a third party, vendors and contractors included, without express authorization.	
31. Assess whether PG&E has a formal process for approving and assessing all network connections and changes to the firewall and router configurations.	31.a. Met with Supervisor, Network Protecting Services, and Principal, Security Engineer SIOC, and it was noted that there is a formal process in place for approving network connections and changes to firewall and router configurations. The firewall request is assessed against the defined baseline security policies and risk rating (no risk, high risk, violation) is assigned. The operational teams will run the day-to-day, but when changes to the network, firewall, or router are needed a formal change request is reviewed/approved by Cybersecurity Team before its released for implementation. Noted that Firewall change request process and approval workflow are documented and firewall security policy automation tool is implemented to identify policy violations. 31.b. Inspected the <i>IT Change Management Process Manual</i> and noted that all changes and clearances to PG&E IT production environments and systems must be represented by a completed and approved Change Request. The goal of the <i>Enterprise IT Change Management Process</i> is to ensure proper planning, impact assessment, risk assessment, testing, coordination, and approval in order to minimize the risk to production and business processes associated with implemented changes. Noted that segregation of duties is in place to maintain necessary risk management and adherence internal controls. 31.c. Met with Supervisor, Network Protecting Services, and Principal, Security Engineer SIOC, and it was noted that the requested changes are tracked and implemented only for the approved duration, and access is removed once the time has lapsed. 31.d. Met with Director, Cybersecurity, and Principal, Cybersecurity Engineer, it was noted that the identified major firewall policy violations are rejected, and minor policy violation are required to follow the exception review and approval process.	
32. Assess whether PG&E's firewall performs stateful inspection	32.a. See CPUC Rule 8a(28) for details.	

Assessment procedures	Assessment test results	Exceptions
(dynamic packet filtering) to restrict network access.	32.b. Met with Supervisor, Network Protecting Services, and, Principal, Security Engineer SIOC, it was noted that PG&E uses Next-Generation Firewalls that are characterized by a variety of standard attributes, one of which is stateful protocol (dynamic packet filtering) to block unauthorized network traffic.	
33. Assess whether PG&E has implemented a DMZ to limit inbound traffic to only system components that provide authorized publicly accessible services, protocols, and ports.	33.a. Met with Director, Cybersecurity, and Principal, Cybersecurity Engineer and inspected the <i>Firewall Standard</i> and noted that the use of a DMZ is required to manage communications between Company networks and all other networks and the internet and to limit inbound traffic.	

CPUC Rule 8		Rule description	
b			
Notification of breach: A covered Third-party shall notify the covered electrical/gas corporation that is the source of the covered data within one week of the detection of a breach. Upon a breach affecting 1,000 or more customers, whether by a covered electrical/gas corporation or by a covered third party, the covered electrical/gas corporation shall notify the Commission's Executive Director of security breaches of Covered Information within two weeks of the detection of a breach or within one week of notification by a covered third party of such a breach. Upon request by the Commission, electrical/gas corporations shall notify the Commission's Executive Director of security breaches of Covered Information.			
Assessment procedures		Assessment test results	Exceptions
1. Assess whether PG&E has documented incident response and breach management procedures in place including roles and responsibilities, testing and training, incident classification and logging, remediation, and program updates.		1.a. Met with Principal, IT Operations Service Manager, and Principal, Incident Response Analyst SIOC, and was informed that the SIOC maintains an Incident Response Team with 24x7 coverage to cyber incidents. Additionally, the SIOC maintains an intelligence team to handle advance persistent cyber threat attacks as well as intelligence intake to act on alerted actionable intelligence. 1.b. Inspected the <i>Cybersecurity Annex to the Company Emergency Response Plan (CERP)</i> and noted that it contains a table listing the required roles in the case of a cyber incident, as well as a table of responsibilities for roles within Lines of Business. Also, noted that PG&E has an extensive <i>Cybersecurity Incident Classification Guide</i> with a wide variety of impact categories, each with clear triggers for identifying the category of impact for an incident category. 1.c. Inspected the <i>Customer Data Loss Event Standard and Procedures</i> and noted that processes are in place to report and investigate potential data loss events. The Standard describes the primary actions to be taken in the case of a customer data loss event, as well as the personnel primarily responsible for these actions. 1.d. Met with Director, Risk, Compliance, Audit & Privacy and Senior Manager Privacy and was informed that the Privacy Team uses a centralized database to track and log privacy incidents and breaches. 1.e. Inspected the <i>Data Breach Playbook</i> and noted that detailed procedures and standard incident reporting and communication templates are maintained. Legal, Regulatory Affairs, Corporate Communications, and Privacy will review draft communications prior to external distribution based on the target audience. 1.f. Met with members of <i>Privacy Program</i> and noted that cybersecurity (including privacy elements) tabletop exercise was scheduled for 2020. However, due to COVID-19 constraints, it was canceled and rescheduled to 2021. PG&E recently	

Assessment procedures	Assessment test results	Exceptions
	COVID-19 constraints, it was canceled and rescheduled to 2021. PG&E recently complete the exercise in 2021. The exercise included ransomware attack and with elements of data breach.	
2. Assess whether PG&E's management has adequately reviewed the incident review process in place.	2.a. Inspected the CERP, section 1.7 and noted that the plan must be reviewed and updated at least annually, or modifications because of lessons learned from exercise and actual incidents, changes to roles or responsibilities, changes to emergency response procedures, organizational structure, recommendations generated by subject matter experts, or changes to law or regulations. The CERP was reviewed and updated in September 2020. 2.b. Inspected internal <i>Customer Information Data Loss Event Procedures</i> and noted that the documents are required to be reviewed and updated by the Customer Privacy Department as content and procedural steps become noncurrent or out-of-date. The <i>Customer Information Data Loss Event Procedures</i> was reviewed and published in December 2020.	
3. Assess whether PG&E can perform forensic analysis in the instance of a Covered Information data incident.	3.a. Met with Manager, Cybersecurity and Analyst, Digital Forensic and noted that PG&E has a team of individuals as part of the SIOC, that are regularly trained in forensic analysis tools and procedures including keeping a detailed chain of custody. 3.b. Met with Senior Manager Investigations and Emergency Preparedness and noted that this team investigates lost assets and data theft incidents. The team engages Cyber, IT, and Privacy teams and provides necessary investigation support. 3.c. Inspected the CERP and noted that forensics experts within Cybersecurity and Legal are consulted throughout the incident response process. Also noted that PG&E collects multiple types of evidence according to PG&E procedures, while meeting all applicable laws and regulations. The CS-IRT team maintains a detailed evidence log and ensures all evidence is accounted for at all times, including transfer from person-to-person. Additionally, noted that PG&E has an extensive <i>Cybersecurity Incident Classification Guide</i> with a wide variety of impact categories, each with clear triggers for identifying the category of impact for a particular incident.	

Assessment procedures	Assessment test results	Exceptions
4. Inspect sample evidence of breach incidents for the last 12 months.	3.d. Inspected the <i>Customer Privacy Data Loss Investigation Procedure</i> and noted that the procedure outlines required investigation actions and indicates the team member responsible for completing these actions within the specified timeframes. 4.a. Per inquiry of relevant stakeholders and inspection of documentation provided, it was noted that PG&E maintains forensic investigation capabilities. 4.b. Met with Senior Customer Privacy Specialist and observed an over-the-shoulder walk-through of sample breach incident. 4.c. Inspected <i>CEUD Data Loss Investigations Tracker</i> and noted that the Privacy Team uses a centralized database to track and log privacy incidents and breaches. The tracker records incidents, gives a brief description, as well as the start and end times, and documents whether they are reportable cyber incidents and whether the CPUC was involved.	

CPUC Rule 8	Rule description	Annual report of breaches:	
c		In addition, electrical corporations shall file an annual report with the Commission's Executive Director, commencing with the calendar year 2012, that is due within 120 days of the end of the calendar year and notifies the Commission of all security breaches within the calendar year affecting Covered Information, whether by the covered electrical corporation or by a third party.	
Assessment procedures	Assessment test results	Exceptions	
5. Assess whether PG&E tracks the reporting requirement and assigns responsibility and accountability to the appropriate departments.	5.a. Reviewed the <i>Annual Privacy Report Procedure</i> and noted that it contains a step-by-step process for the creation, approval, and submission of the <i>Annual Privacy Report</i> to CPUC. Once the report is completed and approval is received from the Privacy Manager, Law Department and the Director Risk, Compliance, Audit & Privacy, the designated Annual Privacy Report Project Lead works with Regulatory Affairs on the submission of the report and related cover letter to the CPUC by the April 30 deadline. 5.b. Met with Director, Compliance, Audit & Risk, and Chief Counsel, and noted the Privacy Team is responsible for tracking the annual privacy reporting process. A team of subject matter experts work with relevant departments to gather data for the report. A member of each department's management is required to certify that the data provided is accurate. The Privacy Team then conducts an additional review to ensure completeness and accuracy. All review and certification of accuracy is tracked and completed through an electronic document routing system. 5.c. Observed screen shots of department heads certifying the data submitted for the <i>Annual Privacy Report</i> was accurate in the electronic document routing system. 5.d. Met with Senior Privacy Specialist and was informed that all data loss events (DLEs) and breaches are tracked and logged by the Privacy Team in a centralized database. If a breach or DLE is determined to involve Covered Information, the incident would be flagged as "Reportable to CPUC" within the database.		

Assessment procedures	Assessment test results	Exceptions
	5.e. Observed the privacy management platform where incidents are logged and noted the system allows the Privacy Team to document if the incident involves Covered Information and to mark it as needing to be reported to the CPUC.	
6. Assess whether PG&E filed its Annual Report to the CPUC as required by the Privacy Decision.	6.a. Reviewed PG&E's 2021 <i>Annual Privacy Report</i> and noted that it was submitted to the CPUC on April 28, 2021. The report identified 31 breaches affecting approximately 2,103 customers within the 2020 calendar year.	

CPUC RULE 9 Accountability and Auditing

Overall assessment result		Exception Noted: The Annual Privacy and Security training is assigned to all employees and contractors through PG&E's My Learning system annually on March 1. From March 1, the Utility allows 90 days to complete the required training. Employees and contractors who start between October 1 and November 30 receive a fixed due date of December 31. Employees and contractors commencing work with PG&E between December 1 and February 28 are not assigned the Privacy and Security training until March 1. As a result, individuals could use, process, or store Covered Information for up to 181 days (December 1 – May 31) without completing the training. In addition, an employee or contractor could start and end their work assignment between December 1 and February 28 without being required to complete the training. During the period between January 1 and February 28 (Covered Period for assessment), 7 employees and 390 contractors had started and ended employment with PG&E and were not required to complete the Privacy and Awareness training.
CPUC Rule 9	Rule Description	Availability: Covered entities shall be accountable for complying with the requirements herein, and must make available to the Commission upon request or audit— (1) the privacy notices that they provide to customers, (2) their internal privacy and data security policies, (3) the categories of agents, contractors and other third parties to which they disclose Covered Information for a Primary Purpose, the identities of agents, contractors and other third parties to which they disclose Covered Information for a Secondary Purpose, the purposes for which all such information is disclosed, indicating for each category of disclosure whether it is for a Primary Purpose or a Secondary Purpose. (A covered entity shall retain and make available to the Commission upon request information concerning who has received Covered Information from the covered entity.), and (4) copies of any secondary-use authorization forms by which the covered party secures customer authorization for secondary uses of covered data.
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Assessment procedures	Assessment test results	Exceptions
1. Assess whether PG&E has a process in place to provide the Commission with the <i>Annual Privacy Report</i> or any other requested documentation.	1.a. Reviewed PG&E's <i>Annual Privacy Report Procedure</i> and noted that it contains a step-by-step process for the creation, approval, and submission of the <i>Annual Privacy Report</i> to CPUC. Once the report is completed and approval is received from the Privacy Manager, Law Department and the Privacy Director, the designated Annual Privacy Report Project Lead works with Regulatory Affairs on the submission of the report and related cover letter to the CPUC by the April 30 deadline. 1.b. Reviewed PG&E's <i>Customer Privacy Compliance Tracking</i> document maintained by the Customer Privacy Program team to track completion and responsible business units for compliance with various sections of the CPUC Privacy Decision. PG&E's Customer Privacy Program team is responsible for working with the appropriate business units within the Utility to complete the <i>Annual Privacy Report</i> and submit it on time to the CPUC. 1.c. Reviewed the <i>Regulatory Compliance Management (RCM)</i> – <i>Identifying New and Changing Requirements</i> procedure document for Customer Operations Customer Care employees and noted that PG&E has an RCM Coordinator that is responsible for reviewing and identifying new and changing requirements and determining requirement ownership. The RCM Coordinator is also responsible for adding the requirement and controls into PG&E's RCM inventory for tracking. Requirement Owners are responsible for communicating the change in requirements to all stakeholders affected by the requirement, implementing the requirements, and working with RCM Coordinator on control design.	

Assessment procedures	Assessment test results	Exceptions
	1.d. Inspected the following documents, in line with the CPUC requirements: - <i>Privacy Notice</i> and <i>Privacy Policy</i> provided to customers and made available to the public through the PG&E website - Prior versions of <i>Privacy Notice</i> made available by request through pgeprivacy@pge.com email address - Internal privacy and data security policies - Listing of agents, contractors, and third parties with access to Covered Information - Templates of secondary-use authorization form (CISR form) by which PG&E secures customer authorization for Covered Information - Training materials provided to employees and contractors related to customer privacy - Procedures for processes related to accessing, collecting, using, and disclosing Covered Information	

CPUC Rule 9		Rule description	Customer complaints:	
b			Covered entities shall provide customers with a process for reasonable access to Covered Information, for correction of inaccurate Covered Information, and for addressing customer complaints regarding Covered Information under these rules.	
Assessment procedures		Assessment test results	Exceptions	
1. Assess whether PG&E provides notice to its customers on how the customers can contact the Company for inquiries, complaints, or disputes related to their personal information.		1.a. See CPUC Rule 3c(1) test results 1.b. Reviewed the <i>Annual Privacy Notice Bill Insert</i> and observed that PG&E provides existing customers an insert encouraging customers to review the <i>Privacy Notice</i> on an annual basis. A link to the <i>Privacy Notice</i> is included in the annual notice, as well as in the <i>Welcome Letter</i> to new customers. In addition, the <i>Annual Privacy Notice Bill Insert</i> also encourages customers to correct their information if they believe it is inaccurate and provides a phone number, email, and address to get in contact with PG&E. 1.c. Reviewed sample welcome emails sent to new residential customers and observed that a link to PG&E's Privacy page is included in these emails. The Privacy page has links to the <i>Privacy Policy</i>, as well as the <i>Privacy Notice</i> where the customers are encouraged to keep their information accurate, and PG&E's contact information is provided therein for this purpose. 1.d. Met with members of the Privacy Team and was informed that customers could contact PG&E Customer Contact Center or submit inquiries through PG&E website to provide inquiries, complaints, or disputes related to their Personal Information.		
2. Assess whether PG&E has a documented process to receive customer disputes, complaints, and inquiries, addresses and resolve complaints, and communicate resolution back to the customer in a timely and satisfactory manner.		2.a. Reviewed documentation addressing PG&E customer relations processes, and noted it includes detailed flowcharts depicting the step-by-step process PG&E personnel must use for handling various forms of customer complaints (informal, formal, written, phone, etc.) and appeals, including investigation and resolution. 2.b. Met with Supervisor, Contact Centers, Quality Assurance, and was informed that the Contact Center is a primary point of contact for customers. CSRs attempt to resolve customer requests and issues while		

Assessment procedures	Assessment test results	Exceptions
	the customer remains on the phone. If needed, the complaint will be escalated to a Senior Service Representative (SSR) for further assistance. 2.c. Met with Senior Manager, Customer Relations, and was informed that if a customer complaint is not resolved by the CSRs or SSRs, then the complaint is escalated to the escalations team. Escalated customer complaints can come through the CSR channel, the CPUC SIMS portal, executive/media complaints, or the "Here to Help" line. All complaints are entered into the CRM tool and tracked from intake to resolution. 2.d. Met with Senior Customer Privacy Specialist and confirmed Privacy related complaints would be routed to the Customer Privacy team for intake and resolution. 2.e. Reviewed a sample Customer Complaint, which was routed to the Privacy team and noted that the item follows the documented procedure for documenting and resolving customer complaints. 2.f. Observed evidence that the root cause of a Customer Complaint was researched, identified, and resolved in order to help prevent this same incident from reoccurring.	
3. Assess whether PG&E has a process to escalate disputes, complaints, and inquiries to help ensures resolution within a timely manner.	3.a. Met with Supervisor, Contact Centers, Quality Assurance, and was informed that if CSRs are unable to help the Customer with a complaint, it would be escalated to an SSR for further assistance. 3.b. Met with Senior Manager, Customer Relations, and was informed that if a customer complaint is not resolved by the CSRs or SSRs, then the complaint is escalated to the escalations team. All complaints are entered into the CRM tool and tracked from intake to resolution. 3.c. Reviewed documentation addressing the customer relations processes, and noted that it includes the steps a Customer Relations representative must take when receiving complaints both from the CPUC and from other sources. It also indicates that once a complaint is received, the Customer Relations department contacts the customer within 24 hours. In addition, it provides guidance that complaints received through the CPUC that are not resolved within 10 days are subject to a \$30 customer credit.	

Assessment procedures	Assessment test results	Exceptions
4. Inspect evidence that PG&E tracks and resolves customer complaints consistent with PG&E's policies.	3.d. Met with Senior Manager, Customer Relations, and noted all complaints, whether received through the CPUC or through non-CPUC sources, are logged, tracked, coded, assigned to a consultant, researched, investigated, resolved, and, in CPUC-related cases, sent back to the Consumer Affairs Branch with any information requested. All complaints are input and tracked to completion in the CRM tool. The Customer Relations team tracks open complaints within the CRM tool dashboard and monitors how long each complaint has been opened.	
	3.e. Observed the tracker where PG&E logs complaints for privacy issues and customer privacy concerns. In 2020, one complaint was received related to Covered Information and KPMG observed that it was documented, investigated, and resolved in a timely manner.	
	4.a. See CPUC Rule 9b(3) for test results. 4.b. Reviewed a sample customer complaint, and noted that it contained the following information: - Date of event, channel it was received, date received, details of customer's concern, steps PG&E took to resolve the concern, date resolved and communicated to the customer, and details of the resolution. 4.c. Observed evidence that the customer complaint involving Covered Information was tracked in the system, investigated, and resolved within a timely manner.	

CPUC Rule 9	Rule description	Training: Covered entities shall provide reasonable training to all employees and contractors who use, store, or process Covered Information.	
C			
Assessment procedures	Assessment test results	Exceptions	
1. Review PG&E's documented privacy awareness program materials to identify personnel who handle and access Covered Information.	1.a. Met with Senior Director, PG&E Academy, and was informed that all employees and non-employees (contractors) that are onboarded by PG&E are trained on Covered Information management and privacy by taking the Security & Privacy Awareness training (See CPUC Rule 9c(2) for test results). All new employees and non-employees who join PG&E are automatically profiled for this training in the My Learning system and will receive an email notifying them of their new training requirement. 1.b. Reviewed the Privacy and Security Awareness training and noted that it is an enterprise-wide training mandatory for all PG&E employees and non-employees, which includes Covered Information specific guidance. We note that 122 employees were considered exempt, and were not required to take this course due to obtaining exemptions for either a one-time excuse due to qualified reasons such as leave of absence or an annual excuse from the course based on the person's role or access. Any exclusion requests must be submitted each year to validate the person's eligibility for being exempt. 1.c. Reviewed the <i>Privacy Committee Charter</i> and noted that PG&E Privacy Committee meets at least three times per calendar year and on an as-needed basis as determined by the Committee Chair. This Committee supports PG&E's Privacy Program and provides leadership and management-level oversight for escalated Privacy related issues to contribute to PG&E's privacy protection efforts. 1.d. Reviewed the <i>Training Governance Dashboard</i>, which details the training requirements, assignment of responsibility, and target audience for the Privacy & Security Awareness training and the Customer Privacy Awareness Deep Dive training. This document noted that the audience for Privacy & Security Awareness is "All PG&E Employees and Non-Employees" with a frequency of 12 months/annually. The target audience for the Customer Privacy Awareness Deep Dive training is employees and non-employee contractors who request access to profiles within		

Assessment procedures	Assessment test results	Exceptions
	specific systems that contain Customer Energy Usage Data and has a frequency of 12 months/annually. 1.e. Met with Senior Customer Privacy Specialist and was informed that when personnel request access to any system containing Covered Information, they are profiled for the Privacy Awareness Deep Dive training. 1.f. Met with representatives from a sample of LOBs with access to Covered Information such as Customer Care, Billing Operations and Credit Operations and confirmed they have taken the mandatory training addressing security and privacy awareness and are aware of PG&E's privacy policies. In addition, the interviewed representatives noted all individuals within their LOBs are also required by PG&E to take the training annually. 1.g. Met with a sample of CSRs, which included CSRs located in the Contact Centers, as well as remote workers. KPMG notes these CSRs represent various levels and different specializations CSRs may have to assist various types of customers. We were informed that they were required to review and electronically sign a supplement to the <i>Code of Conduct</i> relating to COVID-19. This supplemental clause includes specific protocols CSRs must adhere to in a remote environment in order to maintain privacy and security of personal information, including energy usage data. Obtained and reviewed a copy of the <i>COVID-19 Supplement to the Code of Conduct</i> and noted the supplemental clause is intended to expand upon existing company guidelines. The clause provides employees with clear responsibilities for protecting PG&E data and customer information when working remotely.	
2. Understand the awareness material and communications to PG&E personnel to test how internal privacy policies are communicated to associates.	2.a. Reviewed internal trainings, awareness programs, and communications sent to employees with customer privacy content and noted that during the covered period, internal privacy policies were communicated through a formal annual mandatory Security & Privacy Awareness training, which is required for all PG&E employees and contractors. In addition, there were multiple communication efforts to PG&E's personnel regarding customer privacy, including the following:	

Assessment procedures	Assessment test results	Exceptions
	- Internal Communications: • PG&E's Awareness Alert: Five emails sent throughout the year to employees on security and privacy news, as well as mandatory data security measures. It includes links to policies and standards, contact information for IT Security and links to the cybersecurity and privacy intranet sites. • "Five Minute Meetings": Emails sent to employees that include security and privacy topics. In 2020, employees received Five Minute Meetings related to Phishing Awareness, Approved Removable Media and Secure Information Transfer Alternatives, Encrypting Emails, etc. • Documents available to employees through links on the Customer Privacy intranet on tips for privacy settings for various browsers, websites and devices (e.g. Chrome, Instagram, Android, iPhone, iPad, etc.). • Article available on the intranet titled "Ten Easy Steps to Better Protect Customer Information," which also provides the link to PG&E Customer Privacy intranet site where employees can learn about the latest privacy updates. In addition, the article states that employees can send questions or concerns to pgeprivacy@pge.com. • Daily digest emails sent to employees, which includes notifications of updates to policies, tips on securing customer information including energy usage data, reminders that remote work requires all employees to increase their commitment to data stewardship practices. The content of these daily emails may change; however, PG&E utilizes this communication as a means to keep their employees up to date and well informed on all privacy notifications and updates. An example is in the October 16, 2020 Daily Digest, that notified employees of the Privacy & Security Webinar, which focuses on privacy and information security, including PI protections and safeguards.	

Assessment procedures	Assessment test results	Exceptions
	- Events and Programs: - o PG&E hosts annual privacy events, including "Security Awareness Month" and "Privacy Day." The 2020 Privacy day was canceled due to Shelter in Place orders. As referenced above, there was also a "Privacy & Security Webinar" hosted in October. 2.b. Reviewed PG&E's Customer Privacy intranet resource webpage and noted that it provides employees with guidance in maintaining information security and customer data privacy. The website includes external privacy resources, PG&E privacy resources, PG&E privacy standards and procedures, privacy settings, and suggested trainings. 2.c. Reviewed "PGE@Work For Me" intranet home page where employees can access "My Learning" portal with a personalized sub-section called "My Training." This training site includes employees required and pending trainings, including mandatory Company-wide trainings. - Employees with Covered Information access are assigned extra privacy trainings with specific content in My Training. - Employees can also retrieve training and awareness materials by browsing topics of interest, training title names, and training numbers. 2.d. Reviewed internal <i>Guidance Document Library</i> located on the employee intranet "PGE@Work For Me," available to all PG&E employees and contractors with system access, and noted that it includes documents, policies and procedures regarding Information Technology, Customer Care, and Risk & Compliance Management among others. 2.e. Met with Senior Vice President, Customer Care, and noted a key objective for the Privacy Program is to ensure Privacy is weaved into all LOB's trainings and daily procedures, as well as to promote regular conversations around privacy and the importance of protecting customer data.	

Assessment procedures	Assessment test results	Exceptions
	2.f. Met with Director, Internal Audit, and was informed that PG&E includes Customer Privacy in its annual enterprise risk assessment process, where the enterprise identifies high risk areas to build the audit plan for the year. In addition, managing cyber/physical security and safeguarding customer and employee information/data are considered in all internal audits performed. 2.g. Reviewed the <i>Training Timeliness Dashboard</i> available on PG&E intranet site and noted it tracks and documents training completion status and non-compliance. PG&E employees can filter the dashboard for the Security & Privacy Awareness training and monitor team member's compliance with trainings.	
3. Understand PG&E's specific training materials to assess whether they adequately communicate/train employees on how to handle Covered Information. In addition, inspect that employees have completed these privacy and security training requirements.	3.a. Reviewed the enterprise-wide Privacy and Security Awareness Training, an annual mandatory 45-minute web-based training intended for all PG&E employees and contractors and noted it includes modules that related to privacy and security. This training: - Describes categories of classified information, which includes CEUD, third-party requests for customer information, and data minimization. - Establishes standards for new employees and PG&E's security requirements, legal responsibilities, and safeguards for sensitive and confidential data. - Includes a mandatory quiz at the end of the course where a minimum score of 100% is required for completion. - Has a test-out option, which consists of a series of questions related to PG&E's privacy and security policies. These questions are in-depth and sufficiently evaluate the employee's understanding of PG&E's privacy and security policies. In order to pass the course utilizing the test-out option, the employee must answer 100% of the questions correct. If a question is missed, the employee is redirected to the section of the course associated with the missed question to review the material.	

Assessment procedures	Assessment test results	Exceptions
	3.b. Reviewed enterprise-wide training Record Information and Management Training, an annual mandatory 45-minute web-based training for employees that includes guidance on obligations for managing records. - This course is comprehensive and adequately trains employees on how to collect, use and store Covered Information. - This course also has a test-out option, which consists of a series of questions related to PG&E's records and information management policies. These questions are in-depth and sufficiently evaluate the employee's understanding of PG&E's records and information management policies. In order to pass the course utilizing the test-out option, the employee must answer 100% of the questions correct. If a question is missed, the employee is redirected to the section of the course associated with the missed question to review the material. 3.c. Reviewed the <i>New Employee Orientation Package</i>, which includes information on how to safeguard customer records and details on ramifications of potential lost Covered Information and data breaches. The package for new employees includes: - <i>User Responsibilities Standard</i> that indicates that personnel are responsible for protecting the information, information technology, technology assets, IT Services, and operational technology to which they have access. - Overview on transferring files securely and phishing red flags. - A handout on Security at PG&E, which includes examples of customer information, data security best practices, examples of data loss events, and contact information to report a potential Customer Information Data Loss Event. - A handout on Technology Solution Center – Your IT Service Desk, which includes assistance with passwords, email management, wireless and remote access, and other IT resources. 3.d. Met with a Customer Service Representative that joined PG&E after the global pandemic had stated and was informed of the following:	

Assessment procedures	Assessment test results	Exceptions
	- New CSRs were required to attend a two-month virtual onboarding training. The training included how to conduct calls with the customer, handle customer information, and properly authenticate the customer of record. - All CSRs are required to complete the annual Privacy & Security enterprise training. - There was an addendum to the <i>Code of Conduct</i> relating to working remotely protocols due to COVID -19 that the CSRs were required to electronically sign. 3.e. Reviewed department specific customer privacy trainings and noted PG&E communicates the policies and procedures on how to handle Covered Information to employees with higher Covered Information access. - PG&E Customer Privacy Deep Dive (Deep Dive) training: This is a web-based training that specifically addresses customer information, data collection, data authorizations, data storage, data usage, data sharing, data disposal, and data loss events (data breaches). In 2020, it was noted that 17 departments had select employees with access to Covered Information that were required to take the Deep Dive training. - In 2020, it was noted that the credit department and customer service representatives received additional deep dive trainings, which covers data usage privacy, customer authentication, and the release of information to third parties. 3.f. Met with members of the Customer Privacy team and was informed that non-compliance of trainings is provided to supervisors / leaders in monthly reports and auto generated reminder emails are sent to employees and contractors until trainings are completed. 3.g. Met with Senior Director, PG&E Academy, and learned leadership is informed of all instances of non-compliance with the three required trainings, which includes the Privacy and Security Awareness training. Individuals receive automated emails when a new training requirement is added to their My Learning profile and additional emails as the deadline	

Assessment procedures	Assessment test results	Exceptions
	approaches. PG&E provides tracking mechanisms for training compliance including: - Monthly notifications sent to managers and supervisors with employees who are non-compliant - <i>Training Timeliness Dashboard</i>, available on the PG&E intranet site, which displays instances of non-compliance - Reporting of training compliance sent to the Compliance and Ethics Committee 3.h. Inspected the enterprise wide <i>Training Timeliness Dashboard</i> that is available on the PG&E intranet and noted that PG&E employees can access the dashboard and view compliance metrics and stats. 3.i. Inspected the <i>Compliance and Ethics Committee Agendas</i> and noted the annual trainings are discussed and compliance is reported.	
4. Inspect evidence that contractors have completed privacy and security training requirements (e.g., training logs, certifications of compliance, etc.).	4.a. Met with Manager, Customer Privacy Program, and confirmed completion of mandatory trainings is enforced for contractors and non-compliance is escalated through the contract owners for monitoring and compliance. 4.b. Met with members of the PG&E Customer Privacy Program, and was informed that any contractor that will require access to systems that include Covered Information will also be required to complete the Privacy Deep Dive training, in addition to the Privacy and Security Awareness trainings. These trainings are available on the web platform and compliance is tracked automatically in PG&E's My Learning portal. Non-compliance issues are monitored by the LOBs as part of their contract management process. 4.c. Inspected the end of the year 2020 training completion data and noted that PG&E tracks employees and contractors who have and have not completed the required trainings. As of the December 31, 2020 99.76% of employees and contractors completed the Security & Privacy Awareness Training. 4.d. Identified employees and contractors starting work between January 1, 2020 and February 29, 2020 (Covered Period for assessment) with access to Covered Information were not assigned to take the Security &	The Annual Privacy and Security training is assigned to all employees and contractors through PG&E's My Learning system annually on March 1. From March 1, the Utility allows 90 days to complete the required training. Employees and contractors who start between October 1 and November 30 receive a fixed due date of December 31. Employees and contractors commencing work

Assessment procedures	Assessment test results	Exceptions
	Privacy Awareness training until the 2021 training was released and the requirement was triggered on March 1, 2020, after which date the individuals have 90 days to complete the training.	with PG&E between December 1 and February 28 are not assigned the Privacy and Security training until March 1. As a result, individuals could use, process, or store Covered Information for up to 181 days (December 1 – May 31) without completing the training. In addition, an employee or contractor could start and end their work assignment between December 1 and February 28 without being required to complete the training. During the period between January 1 and February 28 (Covered Period for assessment), 7 employees and 390 contractors had started and ended employment with PG&E and were not required to complete the Privacy and Awareness training.

Assessment procedures	Assessment test results	Exceptions
5. Understand the privacy training required of third parties accessing Covered Information in order to test whether or not they are adequately equipped to handle Covered Information.	5.a. Met with Senior Customer Privacy Specialist and was informed that if third parties request access to any system containing Covered Information, they will be profiled for the Privacy Awareness Deep Dive Training, in addition to the Privacy and Security Awareness and Record Information and Management trainings. 5.b. Met with Manager, Vendor Risk Management, and was informed that during new supplier contracting, the privacy team will also review the contract to ensure it includes all relevant terms and conditions for handling Covered Information. 5.c. Reviewed the <i>Contractor Non-Disclosure and Use of Resources and Information Agreement</i> (NDA) that third parties sign prior to engaging in work with PG&E and noted that it includes language stating the contracting party shall not disclose, or otherwise make any confidential information available to any person or third party, including any affiliate of PG&E, without prior written consent of PG&E. In addition, suppliers agree to only use information provided by PG&E for purposes of providing services for work for PG&E. 5.d. Reviewed templates for service agreements with ESPs, CCAs, and CTAs, as well as samples of executed contracts. We noted the contracts require nondisclosure of Confidential Information (including confidential customer information) without PG&E's consent unless any governmental, judicial, or regulatory authority is requiring such Confidential Information pursuant to any applicable law, regulation, ruling, or order. 5.e. Met with Senior Manager, Community Vitality, and was informed that they manage PG&E's relations with ESPs, CTAs, and CCAs. In addition, we noted ESPs and CTAs are required to be certified with the CPUC, prior to entering in any contract with PG&E.	

Assessment procedures	Assessment test results	Exceptions
	5.f. Inspected four PG&E contract templates used by Sourcing for supplier contracting and noted that the documents contain the following provisions: - Disclosure of non-public information: Suppliers agree not to disclose any confidential information or otherwise make it available to any other person, including any affiliate of PG&E that produces energy or energy-related products or services, without the prior written approval of PG&E. - Use of PG&E information: Suppliers agree that they shall use and shall require its employees to use confidential information solely for the purposes of performing services under the contract. - Security and protection of confidential information: Suppliers agree to implement and maintain reasonable security procedures to protect against unauthorized disclosure, destruction, and/or use of the Confidential Information. 5.g. Inspected a sample of six executed third-party contracts and noted that they include confidentiality clauses protecting PG&E's confidential information. Language inconsistencies were identified as we identified different provisions with regards to contractual data privacy standards required from suppliers with access to Covered Information (see CPUC Rule 6c (1)-(3) for details), some of which could require privacy standards potentially less protective than those under which PG&E operates.	

CPUC Rule 9	Rule description	Reporting requirements: On an annual basis, each electrical/gas corporation shall disclose to the Commission as part of an annual report required by Rule 8.b, the following information: (1) the number of authorized third parties accessing Covered Information, (2) the number of non-compliances with this rule or with contractual provisions required by this rule experienced by the utility, and the number of customers affected by each non-compliance and a detailed description of each non-compliance.	
e			
Assessment procedures	Assessment test results	Exceptions	
1. Assess whether PG&E tracks the reporting requirements and assigns responsibility and accountability to the appropriate departments.	1.a. Reviewed the <i>Privacy Program Charter</i> and noted that all facets of Privacy, including reporting requirements from CPUC, are overseen by the Privacy Group. 1.b. Reviewed the <i>Annual Privacy Report Procedure</i> and noted it is the responsibility of the Privacy Team to oversee the CPUC report requirements. The Privacy Team is responsible for contacting each department involved and coordinating with a designated employee to collect necessary data and information. The Privacy Project Lead then drafts the report and gets input and approval from the Law Department and the Privacy Director. Once report is approved, Regulatory Affairs and the Privacy Project Lead work to submit the report to the CPUC. 1.c. Reviewed the <i>RCM – Identifying New and Changing Requirements</i> guidance document for Customer Care employees and noted that PG&E has an RCM Coordinator that is responsible for reviewing and identifying new and changing requirements and determining requirement ownership. The RCM Coordinator is also responsible for adding the requirement and controls into PG&E’s Regulatory Requirements Inventory for tracking. 1.d. Reviewed the <i>Regulatory Requirements Inventory Tracking</i> document and noted it states the Privacy team as the "Requirement Owner." 1.e. Met with Senior Privacy Specialist and was informed that each department is required to approve and certify the information provided for reporting purposes within an electronic document routing system.		

Assessment procedures	Assessment test results	Exceptions
	1.f. Inspected screenshots of departments approving the data provided for the <i>Annual Privacy Report</i> within the electronic document routing system. 1.g. Met with Director, Internal Audit, and was informed that customer data privacy and security are areas assessed and considered in PG&E's yearly internal annual risk assessment. Audit findings that are labeled as "medium" and "high" risks require management to file an Action Plan. High risk findings are reported to the Board and must have an Action Plan in place within 30 days. Medium risk findings get reported to the board at a higher-level and do not have the same 30-day requirement as high-risk findings. PG&E's Internal Audit team monitors and tracks corrective actions to remedy the findings identified by management. In cases where the business fails to comply with the Action Plan, the Board and executives within the business unit will be notified to escalate the matter. We were provided with two audits relevant to this Covered Information assessment: - The first Internal Audit report identified a medium risk item related to Customer Data. For this item, an action plan was filed and the exception was remediated. KPMG obtained the action plan and observed that all remediation steps were completed. - The second Internal Audit report did not contain exceptions associated with Covered Information.	

Assessment procedures	Assessment test results	Exceptions
2. Assess whether PG&E filed its Annual Report to the CPUC as required by the Privacy Decision.	2.a. Reviewed PG&E's Annual Privacy Report and noted that it was submitted to the CPUC on April 28, 2021. The report indicated: - Approximately 94 authorized contractors and vendors and 100 Share My Data vendors were authorized access to Covered Information in 2020 (a total count of 194). - Approximately 16,788 third parties were authorized for Covered Information access by customers. - There were 31 instances of non-compliance with the Privacy Decision or with contractual provisions required by the Privacy Decision which become known to PG&E through its daily operations. Approximately, 2,103 customers were affected. 2.b. Reviewed the 2021 Annual Privacy Report and noted that it was submitted to the CPUC prior to the April 30 deadline.	

Appendix II – Abbreviations used in this report

Abbreviation	Full name
CCA	Community Choice Aggregator
CEUD	Customer Energy Usage Data
CISR	Authorization To Receive Customer Information or Act on a Customer's Behalf
CM	Case Manager
CPUC	California Public Utilities Commission
CSOS	Customer Service Contact Center Operations
CSR	Customer Service Representative
DLP	Data Loss Prevention
DMZ	Demilitarized Zone
DR	Disaster Recovery
EDI	Electronic Data Interchange
ESP	Electric Service Provider

Abbreviation	Full name
I&O	Infrastructure & Operations
ID	Identification
IDS	Intrusion Detection System
IPS	Intrusion Prevention System
IT	Information Technology
LOB	Line of Business
NDA	Non-Disclosure Agreement
NERC CIP	North American Electric Reliability Corporation critical infrastructure protection
PG&E	Pacific Gas & Electric Company
PII	Personally Identifiable Information
RCM	Regulatory Compliance Management
SDLC	System Development Lifecycle
SIEM	Security Information and Event Management
TSR	Third-party Security Review

Appendix III - Stakeholders interviewed

#	Title	Organizational unit	Date
1	Senior Customer Privacy Specialist	Customer Privacy	2/8/2021
2	Director	Customer Care, Risk, Compliance, Audit & Privacy	2/8/2021
3	Senior Director	Cybersecurity	2/17/2021
4	Senior Manager	Cybersecurity	2/17/2021
5	Supervisor	CSOS Training & Quality Compliance	2/17/2021
6	Supervisor	Contact Center Operations	2/17/2021
7	Expert Assessor	Cybersecurity Controls	2/17/2021
8	Chief Counsel	Law - Strategy & Policy	2/18/2021
9	Manager	Customer Care Compliance	2/18/2021
10	Manager	Regulatory Proceedings	2/18/2021
11	Manager	Customer Policy & Operations	2/19/2021
12	Manager	Customer Fund Management	2/19/2021
13	Senior Manager	Customer Privacy	2/24/2021
14	Director	Enterprise Records and Information Management	2/24/2021

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#	Title	Organizational unit	Date
15	Business Operations Specialist Expert	Customer Privacy	2/24/2021
16	Senior Manager	Engagement, Strategy and Programs (Outreach and Escalations)	2/25/2021
17	Manager	Third-party Risk Management	3/2/2021
18	Senior Manager	Cybersecurity Risk Management	3/2/2021
19	Manager	IT & Corporate Services Sourcing	3/2/2021
20	Supervisor	Third-party Security Risk Management	3/2/2021
21	Compliance & Risk Consultant Principal	Customer Privacy	3/2/2021
22	Director	Data Governance	3/3/2021
23	Asset Management Specialist Principal	Risk Compliance & Qualifications	3/3/2021
24	Director	Data Analytics	3/3/2021
25	Director	Enterprise Operations	3/3/2021
26	Operations Service Manager Principal	Enterprise Operations	3/3/2021
27	Director	Cybersecurity, Security Intelligence and Operations Center	3/3/2021
28	Incident Response Analyst Principal	Security Intelligence and Operations Center	3/3/2021
29	Cyber Threat Specialist Principal	eDiscovery and Digital Investigations	3/3/2021
30	Principal Security Engineer	Security Intelligence and Operations Center	3/3/2021
31	Senior Director	PG&E Academy	3/5/2021
32	Senior Manager	Compliance and Ethics	3/5/2021
33	IT Compliance Specialist Senior	IT Compliance	3/5/2021
34	Senior Manager	IT Investment Management	3/10/2021
35	IT Business Process Specialist Principal	IT OCIO Portfolio Management CoE	3/10/2021
36	Senior Manager	Customer Systems and Salesforce	3/10/2021
37	Senior Director	Asset & Work Management	3/10/2021
38	Manager	Cybersecurity Risk Management	3/10/2021

#	Title	Organizational unit	Date
39	Senior Manager	Digital Catalyst Engineering & Platforms	3/10/2021
40	Business Technology Supervisor	Customer Web Portfolio	3/10/2021
41	Supervisor	System Automation Compliance	3/12/2021
42	Supervisor	Cybersecurity SIOC	3/15/2021
43	Supervisor	Network Protection Services	3/15/2021
44	Manager	Network Protection Services	3/15/2021
45	Manager	Cybersecurity	3/15/2021
46	Director	Internal Audit	3/16/2021
47	Senior Manager	Cybersecurity, eDiscovery and Digital Investigations	3/16/2021
48	Digital Forensic Analyst	eDiscovery and Digital Investigations	3/16/2021
49	Manager	Credit Policy & Operations	3/22/2021
50	Manager	Credit Policy & Operations	3/22/2021
51	Manager	Customer Operations, Physical Security	3/22/2021
52	Communications Specialist Expert	Corporate Security Risk and Strategy	3/22/2021
53	IT Product Specialist Expert	Access & IT Products	3/22/2021
54	Senior New Business Representative	Service Planning	3/22/2021
55	Senior Manager	Community Vitality	3/23/2021
56	Third-party Relations Specialist Principal	Community Vitality	3/23/2021
57	Relations Account Manager Expert	Community Vitality	3/23/2021
58	Manager	Billing Operations - Printing and Bill Presentment	3/24/2021
59	Manager	Billing Operations - Business Delivery	3/24/2021
60	Business Project Manager Principal	Billing Operations	3/24/2021
61	Senior Manager	Business Technology	3/25/2021
62	Senior Counsel	Litigation	3/25/2021

#	Title	Organizational unit	Date
63	Senior Vice President	Customer Care	3/31/2021
64	Senior Director	Customer Care Business Operations	3/31/2021
65	Manager	Facilities Services	4/5/2021
66	Service Representative I	CCO Operations	4/6/2021
67	Service Representative II	CCO Operations	4/6/2021
68	IT Solutions Engineer Principal	Cybersecurity Services	4/7/2021
69	Director	Cybersecurity Services	4/7/2021
70	Manager	Cybersecurity	4/12/2021
71	Manager	Identity & Access Management	4/12/2021
72	IT Business Analyst Expert	Identity & Access Management	4/12/2021
73	IT Product Specialist Expert	Privileged Access and Directory Management	4/12/2021
74	IT Product Specialist Senior	Operations – Privacy, Access and Directory Management	4/12/2021
75	Service Representative II	CCO Operations	4/20/2021

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PACIFIC GAS AND ELECTRIC COMPANY
CHAPTER 9
GAS AMI MODULE REPLACEMENT

PACIFIC GAS AND ELECTRIC COMPANY
CHAPTER 9
GAS AMI MODULE REPLACEMENT

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PACIFIC GAS AND ELECTRIC COMPANY

CHAPTER 9

GAS AMI MODULE REPLACEMENT

A. Introduction

1. Scope and Purpose

This chapter demonstrates that Pacific Gas and Electric Company's (PG&E or the Company) expense and capital forecasts for its Gas Advanced Metering Infrastructure (AMI) Module Replacement activities are reasonable and should be approved by the California Public Utilities Commission (Commission or CPUC).

As PG&E advised in its 2020 General Rate Case (GRC),¹ the Gas AMI Modules that it installed between 2006 and 2012 have begun to prematurely fail and require replacement. PG&E has developed a plan to stand up a proactive Gas AMI Module Replacement project to address these Module failures on a geographic basis beginning in 2023. PG&E's customers need to have new Gas AMI Modules in order for the Company to remotely collect gas usage data to issue timely and accurate customer bills. Proactively replacing the Modules on an area-by-area basis, rather than solely replacing Modules ad hoc as they fail, will reduce the overall costs of replacing this equipment.² Importantly, it also will accelerate the replacement and change-out of failing Modules in a way that better enables timely and accurate billing for customers.

In the 2020 GRC, PG&E committed to update the Commission on the status of the Gas AMI Module failures by the next GRC to enable a timely and proactive replacement of the legacy Gas AMI Module system.³

¹ Application (A.) 18-12-009, Hearing Exhibit (HE)-91: Exhibit (PG&E-6), p. 6-16 to p. 6-17, Meter Mesh Technology Life Cycle Risk.

² This chapter is exclusively for Gas AMI Module Replacement Project. PG&E's Metering maintenance activities reside in Customer Care, Exhibit (PG&E-6), Ch. 7. Additionally, PG&E's Gas Module Corrective Maintenance Labor resides in Electric Operations, Field Metering, Exhibit (PG&E-4), Ch. 8.

³ A.18-12-009, HE-91: Exhibit (PG&E-6), p. 6-16 to p. 6-17, Meter Mesh Technology Lifecycle Risk.

PG&E has taken several steps to address the premature failures of its Gas AMI Modules, including conducting troubleshooting in the field, expanding quality assurance product testing, performing failure rate studies, and engaging its supplier to reduce the costs of replacing this equipment. In addition, PG&E has continually refined its failure rate forecast to improve its resource planning and schedule its proactive replacement plan in a way that is efficient and reduces the overall cost of this maintenance program.

Based on PG&E's data and updated modeling, the Company submits its proactive Module replacement plan here. This testimony explains the cost of the proactive Module replacement project, why this project is needed at this time, and PG&E's goal to improve its customer service by supporting the process of timely and accurate bills.

2. Summary of Request

a. Expense

PG&E requests that the Commission adopt its 2023 expense forecast of \$9.4 million for the programmatic management related costs of the proactive Gas AMI Module Replacement project.⁴ These expenses provide for a Project Management Office with centralized, coordinated, and efficient management of the overall replacement project. PG&E had no 2020 recorded expense costs.

b. Capital

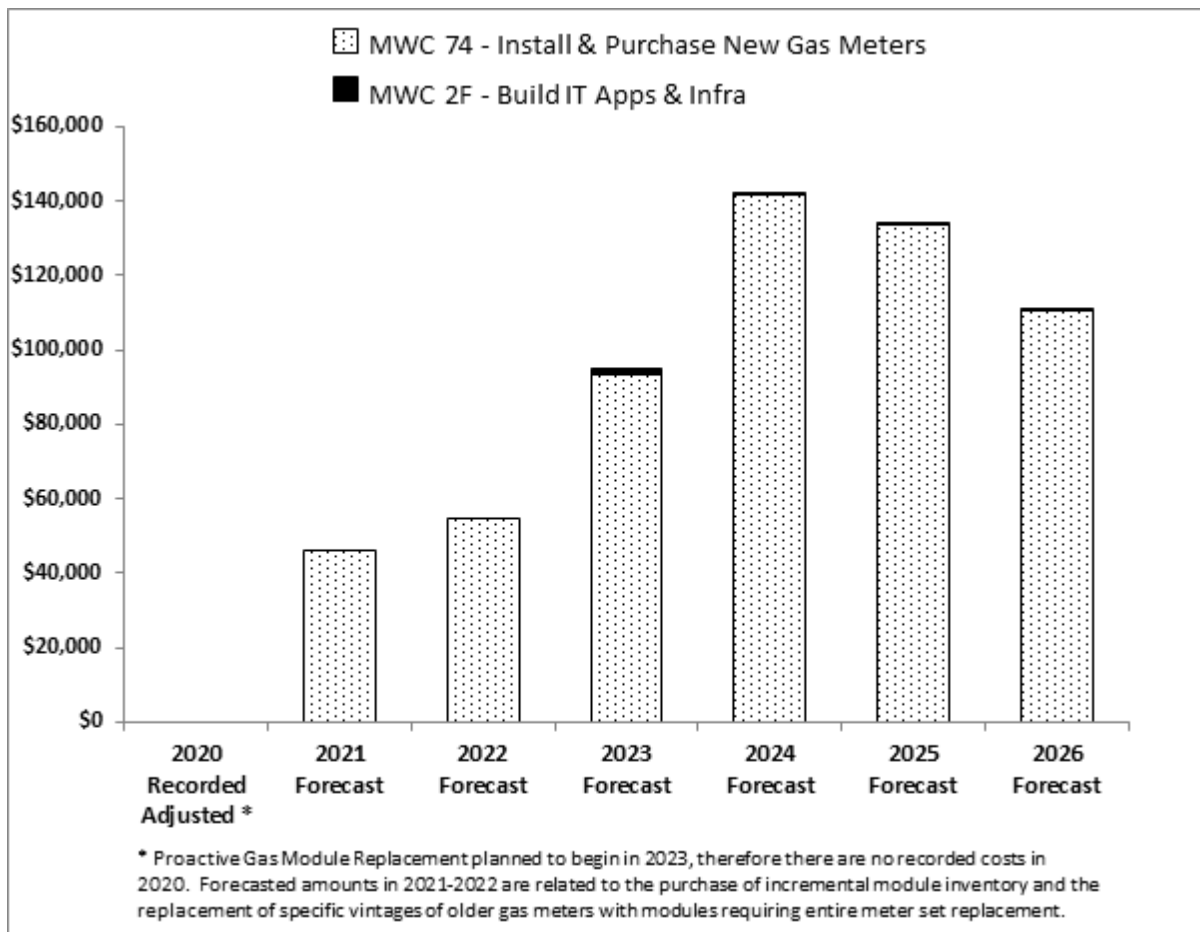
PG&E requests that the Commission adopt its capital forecast of \$480.5 million from 2023 through 2026.⁵ These costs are for the Module materials and proactive replacement labor associated with the Gas AMI Module Replacement project as described in more detail in

⁴ Exhibit (PG&E-6), WP 9-7, Gas Module Expense Forecast Summary. Additionally, the 2023 values vary from the values listed in the Results of Operations (RO) Model due to errata. These amounts do not align to RO Model provided to the Public Advocates Office at the time of filing. The RO will be updated to incorporate these errata with the Joint Comparison Exhibit submittal.

⁵ Exhibit (PG&E-6), WP 9-8, Gas Module Capital Project Forecast Summary. Additionally, the 2021-2026 values vary from the values listed in the Results of Operations (RO) Model due to errata. These amounts do not align to RO Model provided to the Public Advocates Office at the time of filing. The RO will be updated to incorporate these errata with the Joint Comparison Exhibit submittal.

Section C Figure 9-1 shows a forecast of \$46.1 million in capital expenditures in 2021 and \$54.8 million in 2022, and \$480.5 million from 2023 through 2026 for proactive Gas Module replacement on an area by area basis. While Figure 9-1 only depicts costs through 2026, PG&E anticipates the multi-year project will continue through 2027 and that on-going Gas Module corrective maintenance will be needed, both of which will be addressed in the 2027 GRC.

**FIGURE 9-1
GAS AMI MODULE REPLACEMENT
CAPITAL EXPENDITURES BY MAJOR WORK CATEGORY (MWC) BY YEAR 2020-2026
THOUSANDS OF NOMINAL DOLLARS**



3. Overview of Forecasted Costs

PG&E estimates costs of \$36.5 million in expense from 2023 to 2026 and \$480.5 million in capital from 2023 to 2026 for the proactive Gas AMI Module Replacement project. PG&E has performed a Gas AMI Module

1 replacement economic analysis and concluded that including a proactive
 2 replacement program on an area-by-area basis for its remaining legacy Gas
 3 AMI Modules during the 2023 GRC period is the most efficient and
 4 cost-effective means of replacing the Modules.⁶

5 The Company has conducted a market assessment to identify potential
 6 Gas AMI supplier(s) for 2023 and is in the process of selecting its supplier(s)
 7 through a commercial market Request for Proposal (RFP) designed to
 8 balance multiple interests, including cost, improvements in the equipment,
 9 and market risks. In order to forecast costs for the proactive replacement
 10 program, PG&E has estimated certain costs based on the Company's price
 11 with its current supplier. PG&E will update its forecast within a reasonable
 12 time after completing the RFP.

13 For purposes of assessing the need and cost-effectiveness of a
 14 proactive Module replacement project, PG&E commissioned an independent
 15 third party expert consultant to analyze and prepare studies of the Gas AMI
 16 Module failure rates. For example, in the August 2020 legacy Gas AMI
 17 Module failure rate study, a 14 percent increase in failures was observed
 18 from June 2019 to May 2020, when compared to the same timeframe in the
 19 previous year. In addition, the cumulative failure probability indicated that
 20 7.5 percent of Modules would fail by the age of 10 years and that 30 percent
 21 would fail by the age of 14 years.⁷ This contrasts with limits to product
 22 failure rates of less than 1 percent for modules that age as warranted by the
 23 supplier under the contract.⁸ Overall, PG&E forecasts the rate of Gas AMI
 24 Module failures to continue accelerating in advance of their 20-year warranty
 25 from the supplier. PG&E continues to perform Gas AMI Module failure rate
 26 assessments with the Consultant and to re-fresh its failure rate forecast
 27 using the most recent data. These results are used to continually refine the

6 Exhibit (PG&E-6), WP 9-10, Gas Module Replacement Economic Analysis.

7 Exhibit (PG&E-6), WP 9-14 to WP 9-15, Gas Module Failure Rate Study.

8 PG&E's contractual warranty does not entitle PG&E to 100 percent recovery when a module fails; It anticipates that PG&E and its customers will have utilized and benefited from each working module until the unit fails and assigns a benefit and warranty value based on the Module's age at the time it fails.

1 Company's Gas AMI Module failure forecasting and to determine when it will
2 be optimal to start a proactive Module replacement program.

3 PG&E's economic modeling, using updated failure rates, indicated that it
4 would be reasonable and prudent to begin a proactive replacement program
5 of the remaining legacy Gas AMI Module system beginning in 2023.⁹ This
6 approach is designed to benefit PG&E's customers by reducing estimated
7 and delayed bills that may result from individual Gas AMI Module failures
8 and the Company's current corrective maintenance replacement practice of
9 replacing modules after they fail. The proactive Gas AMI Module
10 Replacement program will enable PG&E to better focus, optimize, and more
11 efficiently replace Modules on an area-by-area basis.

12 Table 9-1 below compares PG&E's proactive Gas AMI Module
13 Replacement plan versus solely continuing with the Company's current
14 practice of on-going corrective maintenance replacement of individual
15 modules after they fail. Overall, the net present value of proactively
16 replacing the Gas AMI Modules is -\$936 million, which compares favorably
17 to the projected -\$963 million if the Company continues solely with replacing
18 individual modules after they fail.¹⁰

19 PG&E forecasts that all of the legacy Gas AMI Modules will reach their
20 end of life over the next several years and in the absence of a program that
21 can holistically address this challenge, customers will experience an
22 increase in billing estimations and delayed bills.¹¹ Including a proactive
23 replacement program will be far more efficient and cost-effective than solely
24 continuing with the Company's current practice of sending field labor
25 resources to address and replace each Gas Module failure individually after
26 it fails or to take on manual meter reading again—which PG&E already
27 substantially reduced after rolling out its AMI system more than a decade
28 ago, providing customers with a significant financial benefit.

⁹ Exhibit (PG&E-6), WP 9-13, Gas Module Failure Performance.

¹⁰ Exhibit (PG&E-6), WP 9-10, Gas Module Replacement Economic Analysis.

¹¹ The vast majority of the existing Gas AMI Modules continue to work effectively and so the vast majority of PG&E's 4 million gas customers are continuing to receive these benefits, including timely and accurate automated billing.

TABLE 9-1
GAS AMI MODULE ECONOMIC ANALYSIS SUMMARY

Line No.	Gas Modules	NPV	Description
1	Proactive Replacement Program	-\$936 M	Starting in 2023, a proactive replacement program would enable PG&E to better focus, plan, optimize, and more efficiently replace remaining legacy Modules on an area-by-area basis. Unit costs would be lower due to economies of scale as the Company would cover geographic neighborhoods at one time to minimize travel time and lower unit costs. PG&E has determined that including a proactive replacement program rather than solely performing corrective maintenance starting in 2023 is more cost-effective.
2	Corrective Maintenance	-\$963 M	Under this approach, PG&E would solely continue to replace Gas AMI Modules individually after each one fails. These failures occur ad hoc, are more geographically spread out, resulting in longer job times, and higher unit costs to replace Modules.

4. Support for Request

PG&E's expense and capital forecasts are reasonable because they:

- Allow PG&E to continue supporting the process for providing reliable, timely, and accurate billing to the Company's over 4 million gas customers;
- Enable the continued facilitation of PG&E's automated customer gas usage collection and billing processes;
- Support data collection for customers, Public Purpose Programs, and alternate energy service providers;
- Enable PG&E to start proactively replacing legacy Gas AMI Modules in 2023, which is more efficient and cost-effective than solely performing corrective maintenance replacement of individual Modules after they fail;
- Enable proactive outreach and communications to ensure customers are provided timely and relevant information;
- Include program management activities to reduce project risk, including project schedule and budget;
- Enable transparency with municipalities and customers to promote a positive customer experience.

5. Organization of the Remainder of This Chapter

- Section B – Program and Risk Overview
- Section C – Activities, Costs, and Forecast Drivers by MWC
- Section D – Estimating Method

- Section E – Compliance with Prior Commission Decisions
- Section F – Cost Tables

B. Program Overview

1. Management Structure

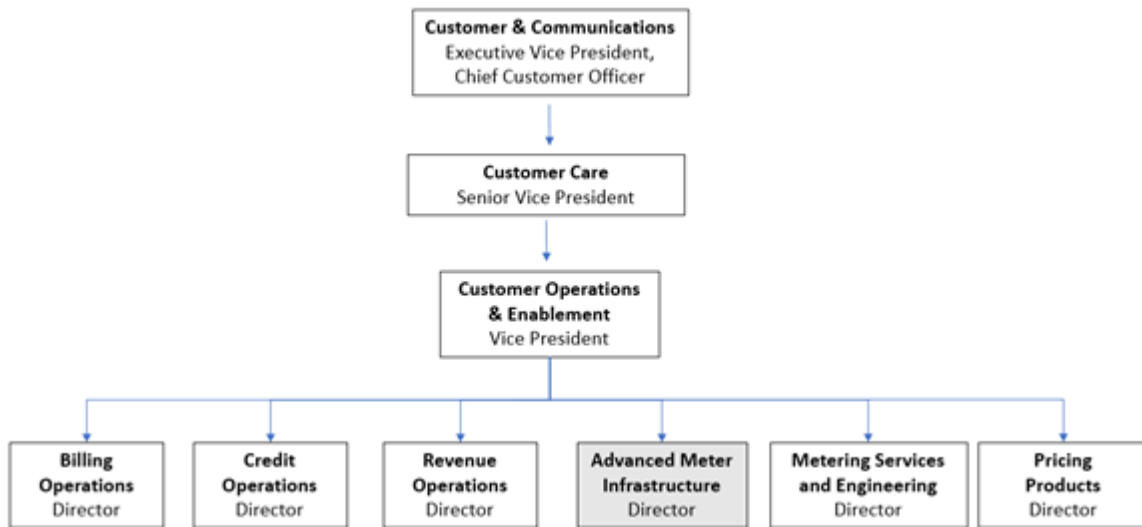
PG&E re-structured its Customer Care organization in March 2020 to better align customer service and support resources.

With this change, PG&E established a Customer Operations and Enablement team that is responsible for meter purchases, quality assurance testing, customer billing, payment processing, credit and collection policy, pricing strategy, and implementation and operations.

In addition, given the significant additional capacity required to support the scale of the Gas AMI Module Replacement project, PG&E created the Advanced Meter Infrastructure Project Management Office (AMI PMO) organization to lead the Gas AMI Replacement project and associated workstreams. The AMI PMO is responsible for leading the financial management, project planning and execution, work and resource coordination, communications and customer outreach, business performance, and portfolio management functions of both the individual 2021-2022 Gas AMI Module replacements and the forthcoming planned proactive Gas AMI Module Replacement project.

The Director for the AMI PMO oversees a team within Customer Operations and Enablement as shown in the shaded area in Figure 9-2.

**FIGURE 9-2
AMI PMO ORGANIZATIONAL STRUCTURE**



Core activities within the AMI PMO include: (1) contract and supplier management; (2) technology program management; (3) business operations; (4) replacement project management; and (5) customer communications and outreach. PG&E describes these activities below.

2. Program Description

PG&E has in service approximately 4.6 million Gas Meters with attached Gas AMI Modules. The Gas AMI Modules automatically communicate customer gas usage readings to PG&E's AMI head end and billing systems. The Modules also support the collection of daily gas usage data which PG&E makes available to its gas customers, as well as for Public Purpose Programs and alternative energy providers.¹²

PG&E installed its Gas AMI Modules from 2006 to 2012 making PG&E one of the early adopters of this technology within the energy industry. PG&E's supplier warrantied these Gas AMI Modules on a pro-rata remaining-life basis for 20 years. In the 2020 GRC, PG&E advised that the Modules would fail prematurely and that it would monitor its failure rates and

¹² D.06-07-027.

1 model trends to facilitate the planning and deployment of replacement
2 equipment when necessary.¹³

3 PG&E has analyzed the Modules' failure rates and trends, and projects
4 that the Modules will increasingly fail over the next several years. The
5 Company forecasts that the Modules will not last the full 20 years that the
6 supplier anticipated.¹⁴ The two main reasons for these premature failures
7 are: (1) Module batteries failing earlier than projected; and (2) Failures
8 resulting from the Modules' plastic casing that expose the internal
9 electronics to weather and moisture, causing degradation over time.

10 These Module failures disrupt communication of gas usage data from
11 the meters to PG&E, which can result in delayed and/or estimated customer
12 bills. Performing Module replacements on a unit-by-unit, corrective
13 maintenance basis is definitively slower and more expensive than a
14 geographically based proactive replacement program and can lead to
15 delayed and estimated bills. These billing exceptions require manual
16 intervention. From a customer experience perspective, including a proactive
17 area-by-area replacement program will improve this issue. Over time,
18 PG&E forecasts that more Modules will fail, necessitating additional
19 estimation of bills. The programmatic replacement of the Modules through a
20 proactive project plan will allow the Company to replace them in the most
21 efficient and cost-effective manner available, enabling fewer non-estimated
22 bills during the replacement period.¹⁵ PG&E has taken proactive steps to
23 help understand and mitigate the risk of Gas AMI Module failures in excess
24 of its forecast during the period:

25 First, PG&E continued to track failure rates and monitor trends closely.
26 Although the number of failed modules is increasing, PG&E has developed
27 work plans and corrective maintenance replacement efforts that have
28 enabled timely handling of the majority of these early failed Gas AMI
29 Modules. The Company had a reasonable expectation that a proactive

13 A.18-12-009, HE-91: Exhibit (PG&E-6), p. 6-16 to p. 6-17, Meter Mesh Technology Life Cycle Risk.

14 A.18-12-009, HE-91: Exhibit (PG&E-6), p. 6-16, Meter Mesh Technology Life Cycle Risk.

15 Exhibit (PG&E-6), Ch. 6, Billing Operations.

1 systemwide replacement of its legacy Gas AMI Modules was not necessary
2 during the 2020 GRC period, and therefore PG&E's capital forecast for Gas
3 AMI Module Replacement during the 2020 GRC cycle was based on normal
4 corrective maintenance replacement practices. As discussed earlier in this
5 chapter, recent failure rates are trending higher than forecasted at that time,
6 resulting in a growing backlog of failed Gas Modules requiring replacement.
7 PG&E's updated failure rate study and economic analysis indicates that
8 initiating a proactive Gas Module replacement program starting in 2023 is
9 more efficient and economic over solely replacing individual Modules on a
10 unit-by-unit corrective maintenance basis after each unit fails.

11 Second, PG&E has an agreement with its current supplier on a process
12 and commercial terms for replacing the Gas Modules, including having the
13 supplier proactively install replacement units for certain vintages of Modules
14 that it expects to expire particularly early due to battery life. PG&E is
15 currently working with its supplier on the specific locations at which the
16 Modules will be proactively replaced. The forecast in this GRC for Gas AMI
17 Module replacement takes into account all Module replacement activities
18 that are planned and forecasted to mitigate failures that occur before and
19 during the 2023 GRC period.¹⁶

20 Third, PG&E has a warranty returns program with its supplier for failures
21 determined to be attributable to the supplier's product. PG&E has taken
22 warranty credits to partially offset its incremental costs for purchasing and
23 replacing the Gas AMI Modules prior to their expected 20-year life.¹⁷

24 Fourth, PG&E has supported its customers with interim customer
25 satisfaction payments with respect to back-bill issues stemming from module
26 failures.

27 Finally, PG&E has continued to monitor the Gas AMI technology
28 marketplace.

¹⁶ Exhibit (PG&E-6), WP 9-11, Gas Module Replacement Plan.

¹⁷ Exhibit (PG&E-6), WP 9-12, Gas Module Warranty Returns.

a. Gas AMI Module Replacement Project

PG&E's proactive Gas AMI Module Replacement project is planned to start in 2023 and it includes three distinct workstreams that will be executed in phases:

- Technology and Supplier Selection
- Proactive Module Replacement
- Customer Communications

1) Gas AMI Technology and Supplier Selection

PG&E is undertaking a focused commercial RFP to confirm the costs associated with its replacement plan. This effort also will contemplate potential technology improvements and market risks. The Company's goal is to execute necessary commercial contracts by the first quarter of 2022 for the proactive Gas AMI Module Replacement project plan to start in 2023.

PG&E recognizes that continuing with its current supplier likely is its least expensive alternative and has based its forecast on that option; however, the Company's goal is to adequately address its technology needs, mitigate market risk, and address cost constraints by selecting the right technology and supplier(s), and will update its forecast within a reasonable time after completing its upcoming RFP.

2) Proactive Module Replacement

As discussed earlier in this chapter, PG&E determined that proactively replacing the Company's legacy Gas AMI Modules starting in 2023 is more efficient and cost effective, and will lead to improved customer experiences, than solely continuing to replace Modules after they individually fail, which may cause increases in billing estimations and delayed bills. Therefore, beginning in 2023, PG&E plans to proactively replace its remaining legacy Gas AMI Modules. PG&E will adopt a concentrated effort to replace legacy Modules on an area by area basis.¹⁸ PG&E anticipates that this project will extend beyond the current 2023 GRC cycle. PG&E

¹⁸ Exhibit (PG&E-6), WP 9-11, Gas Module Replacement Plan.

1 plans to use its internal field Module replacement labor resources
2 and qualified external contractors during the Module replacement
3 program. This Module replacement project plan accounts for all
4 Modules that PG&E anticipates it will replace prior to and during the
5 2023 GRC period.

6 Table 9-2 below summarizes the Company's multi-year Module
7 replacement plan. PG&E's proposed proactive Module replacement
8 project has determined that concentrating the work by geographic
9 location will reduce the need for individual truck rolls and in so doing
10 reduce unit and customer costs. In short, it will be far more efficient
11 and therefore more cost-effective to replace more Modules in a city
12 or neighborhood at one time rather than solely continuing with
13 corrective maintenance and replacing each Module on a piecemeal
14 basis after it fails. However, as the original Modules continue to fail
15 throughout the GRC period, the Company also will need to continue
16 with necessary corrective maintenance work to address Module
17 failures in real time. Over the course of this multi-year project, as
18 PG&E completes more of the proactive Module replacements, there
19 will be cost savings and net benefits to customers due to fewer
20 Modules to replace after they fail on an individual basis. This will
21 result in reducing corrective maintenance replacements units and
22 lowering unit costs over time.

**TABLE 9-2
GAS AMI MODULE REPLACEMENT PLAN**

Line No.	Supplier Warranty Replacement	Corrective Maintenance (CM)	Proactive Module Replacement Program
1	Mid-2021 to Early-2023	2021-2022/2023-2026	2023-2026
2	230,000 Units	710,000 Units ('21-'22) 1,250,000 Units ('23-'26)	1,370,000 Units
3	Supplier Covered	GRC 2020 Funded GRC 2023 Forecasted	GRC 2023 Forecasted
4	Certain Modules replaced by the supplier pursuant to warranty	Continue replacing Modules individually after they fail	Proactively replace Modules on an area by area basis.
Notes: Proactive Module Replacement continues through 2027. Replacement plans are based on a forecast and subject to refinement. CM Module labor costs are in Electric Ops Field Metering, Exhibit (PG&E-4), Chapter 8. Excludes newer vintage Modules forecasted to be replaced after 2023 GRC period.			

3) Customer Communications

PG&E has developed an integrated customer outreach plan that includes communicating to customers, the community, and other stakeholders to inform them about the Gas AMI Module replacement project. PG&E will adjust its approach based on real-time customer feedback. This is a multi-year program and PG&E is committed to proactively communicating to customers about this program. PG&E plans to coordinate outreach and communications to provide customers with timely and relevant information about the Module replacements at their premises through various channels, including but not limited to media, direct mail, direct-to-door, and digital outreach.¹⁹

b. Risk Overview

The Gas AMI Module failures is not a risk event listed on PG&E's Corporate Risk Register and was not addressed during the Company's

¹⁹ Exhibit (PG&E-6), WP 9-16 to WP 9-17, Customer Outreach Plan.

2020 Risk Assessment Mitigation Report proceeding.²⁰ While Gas Module failures do not present a safety risk and do not result in any service interruption, in the 2020 GRC, PG&E advised that its Modules would likely not last the full 20 years that PG&E's supplier had warranted.²¹

PG&E's Gas AMI Module technology and systems are a foundational asset for the Company and essential for maintaining and providing timely and accurate billing services to customers. This technology, which was groundbreaking when the CPUC first approved PG&E's implementation of it over a decade ago, has evolved and improved. PG&E's supplier anticipated that the original Gas AMI Modules would last 20 years and that they then would require replacement. The then-unanticipated, earlier than expected Gas AMI Module failures have triggered the need to expedite the adoption and implementation of Gas AMI Module replacements.

PG&E's current system relies on one provider, which has helped to contain costs while introducing the risk of having sole source supplier. The Company is evaluating long-term solutions and alternatives to help mitigate the risk of having a sole source AMI supplier. The advantages of diversifying suppliers would allow PG&E to counterbalance the benefits and detriments of a vendor's particular product and/or improvements that develop over time. This approach could potentially have more suppliers compete on pricing to reduce costs long-term. More importantly, if something were to go wrong with one vendor's product, the scope of replacement would be limited and allow PG&E options to mitigate the risk. PG&E recognizes that there is a balance to achieve and will actively evaluate opportunities to reduce risks through its forthcoming RFP.

²⁰ Exhibit (PG&E-2), p. 1-31, Attachment A, Table 1-1 for the list of risk events on PG&E's Corporate Risk Register.

²¹ A.18-12-009, HE-91: Exhibit (PG&E-6), p. 6-16 to p. 6-17, Meter Mesh Technology Life Cycle Risk.

C. Activities and Costs by MWC

1. Expense MWCs

The overall expense forecast for 2023 is \$9.4 million. Descriptions of activities included in each expense MWC provided below.²²

a. MWC EZ (Manage Various Customer Care Processes)

PG&E's 2023 forecast of \$3.7 million includes incremental expenses associated with the programmatic management, communications, and customer outreach activities for Gas AMI Module Replacement. Project management activities include customer communications and outreach, contract and supplier management, technology management, developing and executing project plans, work and resource coordination, safety and employee training, business performance, financial management, and project management functions related to the Gas AMI Module Replacement project.

b. MWC HY (Change and Maintain Gas Modules)

PG&E's 2023 forecast of \$0.4 million includes incremental expenses associated with employee, field, and safety training related to Gas AMI Module Replacement.

c. MWC JV (Maintenance of Information Technology (IT) Applications and Infrastructure)

PG&E's 2023 forecast of \$0.5 million includes expenses to support the Gas AMI Module Replacement project. The incremental costs are associated with mobile connect technology devices needed by field personnel to program the communication module and to test for connectivity after the installation is completed.²³

d. MWC IS (Billing and Customer Care Operations)

PG&E's 2023 forecast of \$4.9 million includes activities associated with incremental Billing and Customer Care Operations costs associated with the Gas AMI Module Replacement. These costs include proactive outbound calls, outreach to impacted customers to discuss billing and

²² Exhibit (PG&E-6), WP 9-7, Gas Module Expense Forecast.

²³ Exhibit (PG&E-6), WP 9-9, IT Project Expenditures.

Module replacements, and operational costs to process customer billing exceptions.

2. Capital MWCs

Descriptions of activities included in each capital MWC are provided below. Total capital includes \$480.5 million forecasted for 2023 through 2026 are exclusively for the proactive Gas AMI Module Replacement project. Additional capital costs for 2027 and beyond are not represented here, however the project will likely continue through at least 2027 with on-going corrective maintenance thereafter.

a. MWC 74 (Gas Modules Capital)

PG&E's forecast of \$93.2 million for 2023, \$141.6 million for 2024, \$133.5 million for 2025, and \$110.2 million for 2026 includes activities associated with the Module materials and proactive labor costs to replace Modules. As discussed earlier in this chapter, these costs are exclusively for Gas AMI Module Replacement project.²⁴ Additional replacement capital for 2027 and beyond are not represented here, however the project will continue through at least 2027 with on-going corrective maintenance thereafter.

b. MWC 2F (Build IT Applications & Infrastructure)

PG&E's 2023-2026 forecast of \$2.0 million includes activities associated with the Company's AMI Gas Datacenter hardware lifecycle and headend system upgrade.²⁵ The IT related costs associated with this project includes: vendor professional services for datacenter hardware lifecycle and system upgrade, vendor annual perpetual software maintenance fees, and software licensing.

D. Estimating Methods

PG&E forecasts expenses by: (1) determining project management and outreach costs needed for the proactive Gas AMI Module Replacement project;

²⁴ This chapter is exclusively for Gas AMI Module Replacement. PG&E's Metering maintenance activities and the associated costs reside in Customer Care, Exhibit (PG&E-6), Ch. 7. Additionally, PG&E's Gas Module corrective maintenance labor costs reside in Electric Operations, Field Metering, Exhibit (PG&E-4), Ch. 8.

²⁵ Exhibit (PG&E-6), WP 9-9, IT Project Expenditures.

(2) determining Contact Center and Billing support expenses required; and
 (3) estimating head-end system and data center upgrades based on historical costs.

PG&E forecasts capital by using two main methods to estimate the capital expenditures required for its Gas AMI Module Replacement project. The first method includes deriving 2020 labor and materials unit costs for Gas AMI Module replacement and multiplying the forecast of units by the expected unit cost, adding escalation where appropriate. The second method includes non-labor assumptions and escalation where appropriate.²⁶

E. Compliance with Prior Commission Decisions

PG&E's Gas AMI Module Replacement activities are consistent with and meet PG&E's commitment in its 2020 GRC to continue to mitigate the impacts of Gas Module failures on accurate and timely metering and billing to customers, and to update the Commission on its plans for further mitigation activities, including Gas AMI Module replacement, in this 2023 GRC.

F. Cost Tables

PG&E's forecast for the Gas AMI Module Replacement project is summarized in the following tables:

- Table 9-3 only shows 2023 forecast expenses for a total of \$9.4 million.
- Table 9-4 shows \$46.1 million in capital for 2021 and \$54.8 million in capital for 2022 funded from the Company's previous GRC, and then \$480.5 million in capital for 2023-2026 for replacement. Capital costs for 2027 are not represented, however the project will continue through that year.

²⁶ Labor escalation rates can be referenced in Exhibit (PG&E-8), Human Resources, Ch. 4, Total Rewards, Short-Term Incentive Plan, Non-Qualified Retirement and Labor Escalation; Non-Labor Escalation rates can be referenced in Exhibit (PG&E-12), General Report, Ch. 3, Escalation Rates.

TABLE 9-3
2023 GENERAL RATE CASE
EXHIBIT (PG&E-6), CHAPTER 9, GAS AMI MODULE REPLACEMENT
EXPENSE BY MAJOR WORK CATEGORY
(THOUSANDS OF NOMINAL DOLLARS)

Line No.	MWC	Description	2016 Recorded Adjusted	2017 Recorded Adjusted	2018 Recorded Adjusted	2019 Recorded Adjusted	2020 Recorded Adjusted	2021 Forecast	2022 Forecast	2023 Forecast	Reference (A)
1	EZ	Manage Var Cust Care Processes	-	-	-	-	-	-	-	3,675	
2	HY	Change/Maint Used Gas Meters	-	-	-	-	-	-	-	400	
3	IS	Bill Customers	-	-	-	-	-	-	-	4,862	
4	JV	Maintain IT Apps & Infra	-	-	-	-	-	-	-	500	
5	Total*		-	-	-	-	-	-	-	9,437	WP 9-1 line 5

**2023 values vary from the values listed in the Results of Operations (RO) Model due to errata. These amounts do not align to the RO Model provided to the Public Advocates Office at the time of filing. The RO will be updated to incorporate these errata with the Joint Comparison Exhibit submittal.*

TABLE 9-4
2023 GENERAL RATE CASE
EXHIBIT (PG&E-6), CHAPTER 9, GAS AMI MODULE REPLACEMENT
CAPITAL EXPENDITURES BY MAJOR WORK CATEGORY
(THOUSANDS OF NOMINAL DOLLARS)

N.O.	MWC	Description	2020 Recorded Adjusted *	2021 Forecast	2022 Forecast	2023 Forecast	2024 Forecast	2025 Forecast	2026 Forecast
1	74	Install New Gas Meters	-	46,063	54,751	93,238	141,551	133,485	110,235
2	2F	Build IT Apps & Infra	-	-	-	1,750	75	75	75
3	Total		-	46,063	54,751	94,988	141,626	133,560	110,310

* Proactive Gas Module Replacement planned to begin in 2023, therefore there are no recorded costs in 2020. Forecasted amounts in 2021-2022 are related to the purchase of incremental module inventory and the replacement of specific vintages of older gas meters with modules requiring entire meter set replacement.