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Witness(es): Thomas Crowley

PACIFIC GAS AND ELECTRIC COMPANY

2023 GENERAL RATE CASE

REVISED TESTIMONY

EXHIBIT (PG&E-7-R)

SHARED SERVICES AND INFORMATION TECHNOLOGY

CHAPTER 5



PACIFIC GAS AND ELECTRIC COMPANY
2023 GENERAL RATE CASE
EXHIBIT (PG&E-7-R)
SHARED SERVICES AND INFORMATION TECHNOLOGY
REVISED TESTIMONY

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1 **PACIFIC GAS AND ELECTRIC COMPANY**
2 **CHAPTER 5**
3 **REAL ESTATE**

4 **A. Introduction**

5 **1. Scope and Purpose**

6 The purpose of this chapter is to demonstrate that Pacific Gas and
7 Electric Company’s (PG&E or Company) expense and capital forecasts for
8 common utility plant buildings and yards (referred to as “facilities”) are
9 reasonable and should be adopted by the California Public Utilities
10 Commission (CPUC or Commission).

11 PG&E’s Real Estate organization, known internally as Corporate Real
12 Estate Strategy and Services (CRESS), is responsible for governing,
13 planning, acquiring, designing, constructing, operating, and maintaining
14 7.7 million square feet (sq. ft.) of facilities throughout PG&E’s 72,000 square
15 mile service territory. These facilities include but are not limited to service
16 centers (SC), data centers, contact centers, office buildings, shops,
17 warehouses, construction and equipment yards, vehicle maintenance
18 garages, Customer Service Offices (CSO), and meeting and training
19 facilities. This cross-section of facilities will be referred to as “workspaces.”

20 In the original 2020 General Rate Case (GRC), PG&E outlined a
21 long-term real estate strategy that adapted to changing business needs and
22 provided for safe, compliant, reliable, and affordable facilities while reducing
23 the company’s overall real estate footprint through the Regional Office
24 Optimization Plan and SC Optimization Plan.

25 This 2023 GRC request reflects PG&E’s continuing evolution of its
26 CRESS strategy including the planned sale of its San Francisco
27 General Office (SFGO) headquarters and move to a new headquarters
28 location in Oakland along with continued investment in its operations
29 portfolio to support ongoing wildfire mitigation and response and customer
30 support.

31 Costs for acquiring or improving buildings and yards that are planned by
32 a Line of Business (LOB) other than CRESS, but where project planning and
33 delivery will be part of the CRESS book of work, are included in the

1 respective LOB testimony and forecast and not included herein. Table 5-1
 2 identifies the LOB scope of work and exhibits and chapters that contain
 3 additional forecasts for workspace expenditures. Further discussion of the
 4 LOB specific requests is contained in Section B.f.5 below.

**TABLE 5-1
 OTHER REAL ESTATE FORECASTS**

Line No.	Line of Business/Chapter Title	Exhibit/Chapter Number
1	Aviation Services: "Aviation Operations Center"	Exhibit (PG&E-7), Chapter 2

5 **2. Summary of Request**

6 **a. Expense¹**

7 PG&E requests that the Commission adopt CRESS's gross expense
 8 forecast of \$122.0 million for 2021, \$131.1 million for 2022, and
 9 \$124.3 million for 2023. PG&E's 2023 expense request for CRESS
 10 represents a 1.7 percent decrease from the base year 2020 recorded
 11 costs of \$126.5 million. The decrease is primarily driven by the
 12 reduction of operating cost from the SFGO move to Oakland Lakeside.

13 PG&E derives a net expense forecast for CRESS by allocating
 14 a portion of CRESS's expense costs² to non-expense orders such as
 15 Capital, Balancing Account and Other Balance Sheet orders.³
 16 CRESS's 2023 net expense forecast⁴ of \$57.8 million is \$5.2 million
 17 less than 2020 recorded adjusted net expense of \$63.0 million.

1 See Exhibit (PG&E-7), WP 5-1, Table 5-1, Expenses by Major Work Category.

2 Allocated costs are described in the tables and workpapers as Building Services
 Overhead Credit (MWC AB).

3 See Exhibit (PG&E-12), Ch. 3 for additional information on the cost model.

4 Net expense forecast has been updated to reflect the recalculation of the Building
 Services Overhead Credit due to the SFGO Sale.

1 **b. Capital**⁵

2 PG&E also requests the Commission adopt its capital forecasts of
3 \$182.0 million for 2021, \$176.0 million for 2022, \$1,044.7 million for
4 2023, \$183.0 million for 2024, \$181.0 million for 2025, and
5 \$160.0 million for 2026. Recorded adjusted capital expenditures were
6 \$197.5 million for 2020. PG&E's 2023 capital request for CRESS
7 represents a 429 percent increase from the base year 2020 recorded
8 costs. This increase is primarily driven by the Oakland Lakeside
9 purchase and SC investment.

10 Details about the activities, costs, and drivers for these forecasts are
11 provided in Sections B and C below.

12 **3. Deferred Work Review**

13 Section 5.2 of the 2020 GRC Settlement Agreement requires PG&E to
14 make an additional showing in its 2023 GRC testimony for work that was
15 previously requested and authorized based on representations that the work
16 was needed to provide safe and reliable service.

17 In the 2020 GRC, CRESS did not request or receive authorized funding
18 for any work: (1) identified as safety, reliability, or maintenance
19 (SRM)-related in the 2020 Risk Spending Accountability Report (RSAR)
20 or (2) based on representations in testimony and work papers that the work
21 was needed to provide safe and reliable service.

22 **4. Overview of Recorded and Forecast Costs**

23 **a. Expense**

24 CRESS forecasts a gross expense forecast of \$124.3 million in
25 2023, which represents a \$2.2 million decrease, compared to 2020
26 recorded adjusted costs of \$126.5 million. The key drivers of this
27 decrease are described below.

5 See Exhibit (PG&E-7), WP 5-9, Table 5-9, Capital Expenditures by Major Work Category.

1 **1) Escalation**

2 CRESS forecasts a \$3.5 million increase due to escalation.^{6,7}
3 Process improvements, efficiency programs and improved contract
4 management have offset a portion of escalation.

5 **2) Facilities and Portfolio Management**

6 Facilities Management (FM) and Portfolio Management costs
7 account for a \$3.2 million increase in expense, as compared to the
8 2020-2021 period, due to escalation and returning to pre-COVID-19
9 levels of service. The period from March 2020 and continuing
10 through writing of this testimony showed facilities costs related to
11 the office portfolio lower than previous trend. When PG&E
12 personnel return to work, we expect similar operating expenses but
13 an increase in janitorial and other cleanness activities due to
14 PG&E's "Work from Home" pandemic mitigation (less office
15 operating expenses). Increases are primarily due to enhanced
16 cleaning and other pandemic mitigations in its operations portfolio
17 that supported PG&E's essential operations. Facilities management
18 includes janitorial service, repairs and maintenance, landscape,
19 water, sewer, gas, electricity, waste disposal and recycling services,
20 rent (for leased facilities), mail delivery, and conference center
21 services. Portfolio Management includes strategic portfolio planning
22 and governance, real asset development, planning, design, and
23 delivery services, compliance, and expense projects.

24 **3) RAMP – Seismic**

25 RAMP expense is \$1.9 million in 2023, a \$1.5 million increase
26 from 2020 to address seismic study results.

27 **4) Fire Risk Mitigation Memorandum Account**

28 Fire Risk Mitigation Memorandum Account (FRMMA) expense
29 is \$1.1 million in 2023, a \$0.6 million increase from 2020. Detailed

6 See Exhibit (PG&E-12), Ch. 3 for the forecast non-labor escalation rates.

7 See Exhibit (PG&E-8), Ch. 4 for the forecast labor escalation rates.

1 information on the work and costs recorded to the FRMMA can be
2 found in Exhibit (PG&E-7), Chapter 5, Appendix 1.

3 **5) SFGO/Oakland Lakeside Transition⁸**

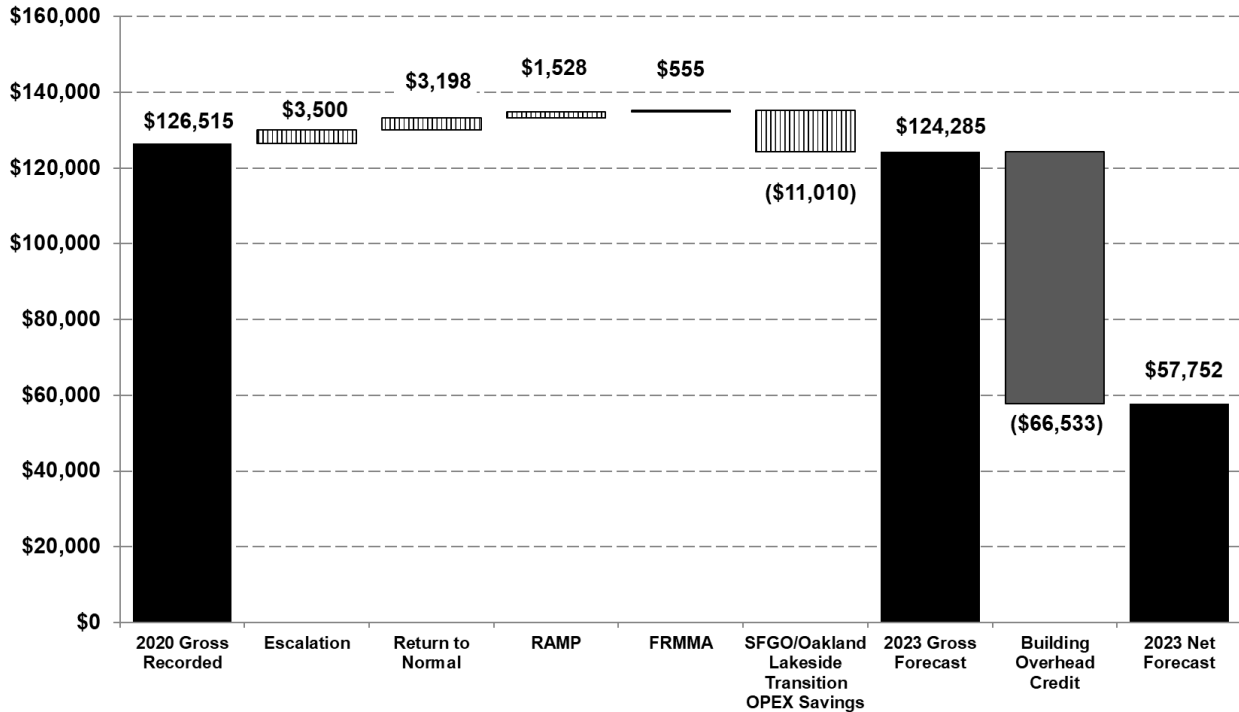
4 SFGO/Oakland Lakeside Transition expense is forecast to
5 decrease \$11.0 million in 2023. This decrease is driven by the
6 reduction of operating costs attributable to moving from SFGO and
7 the San Ramon Office Sunset Building at 3401 Crow Canyon Road
8 to Oakland Lakeside. Specifically, the reduction is attributable to the
9 sale of the SFGO and termination of the San Ramon Office lease in
10 July 2022 and the Bishop Ranch BR1Y lease in June 2023.⁹

11 Figure 5-1 below shows the change from CRESS's 2020
12 recorded adjusted expense to its 2023 forecast expense.

⁸ Expense forecast updates, including savings, for 2021, 2022 and Q1 2023 will be accounted for in the General Office Sale Memorandum Account (electric) and General Office Sale Memorandum Account (gas), net of cost to exit, as follows: (\$3.3) million in 2021, \$10.5 million in 2022, and \$10.9 million in 2023. These values are not reflected in the expense walks and values referenced throughout this chapter.

⁹ PG&E will also be terminating the Concord Resource Management Center facility lease in February 2024. This termination does not result in any further reductions.

**FIGURE 5-1
EXPENSE WALK (2020-2023)
(THOUSANDS OF NOMINAL DOLLARS)**



1 **b. Capital**

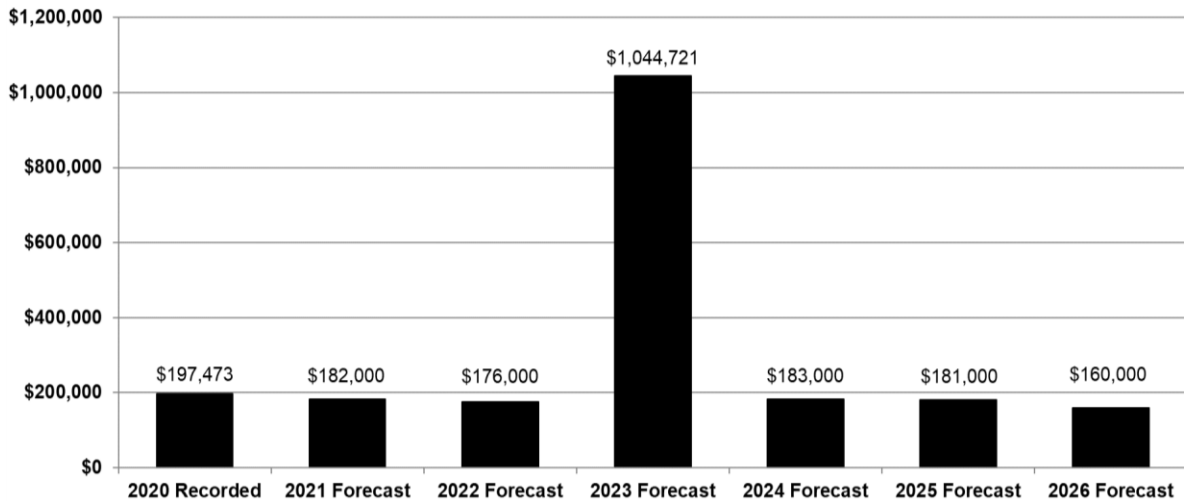
2 CRESS forecasts total capital expenditures of \$1,044.7 million in
3 2023, which represents a \$847.2 million increase, compared to 2020
4 recorded adjusted expenditures of \$197.5 million. CRESS's capital
5 expenditures forecast for the 2023-2026 period is driven by the following
6 eight initiatives:

- 7 • Oakland Lakeside Transition;¹⁰
- 8 • Service Center (SC) Investment Plan;
- 9 • Regional Office Investment Plan;
- 10 • CSO Investment Plan;
- 11 • LOB Operational Initiatives;
- 12 • Regionalization;
- 13 • Facility Asset Upkeep (FAU) Program;

¹⁰ PG&E's capital forecast changes for 2021 thru 2026 will be addressed in the petition for modification application, which will be filed within 90 days following the closing date of the Lakeside purchase and will reflect the final purchase price. See Exhibit (PG&E-10), Chapter 10, page 10-10, lines 11 through 14.

- Safety, Security, and Compliance; and
 - Fire Risk Mitigation Memorandum Account (FRMMA) – Wildfire.
- Each of these initiatives is described in Section B.1.f. of this chapter. Figure 5-2 below shows CRESS’s 2020 recorded adjusted expenditures and forecasted expenditures for 2021-2026.

**FIGURE 5-2
CAPITAL EXPENDITURES (2020-2026)
(THOUSANDS OF NOMINAL DOLLARS)**



5. Support for Request

PG&E’s expense and capital forecasts for CRESS are reasonable and will allow the Company to:

- Comply with applicable laws and regulations;
- Invest in workspaces to enable critical operations, support PG&E’s system hardening and wildfire efforts, and provide essential customer service and support for all field crews, equipment, vehicles, and materials staging;
- Reduce operational, safety, and compliance risks and maintain safe, reliable, and efficient facilities to better serve PG&E’s customers.

6. Organization of the Remainder of This Chapter

The remainder of this chapter is organized as follows:

- Section B – Program and Risk Overview;

- 1 • Section C – Activities, Costs, and Forecast Drivers by Major Work
- 2 Category (MWC);
- 3 • Section D – Estimating Methods;
- 4 • Section E – Revenue Forecast; and
- 5 • Section F – Cost Tables.

6 **B. Program and Risk Overview**

7 **1. Program Description**

8 **a. Department Overview**

9 CRESS is responsible for planning, acquiring, designing,
 10 constructing, operating, and maintaining PG&E's facility or workspace
 11 portfolio. Specific activities include assessing long-term business
 12 needs, developing, and executing real estate plans, and regularly
 13 monitoring and maintaining facility conditions. CRESS also provides
 14 support for surplus properties,¹¹ and is responsible for providing
 15 business support services, such as maintaining conference centers and
 16 training facilities.

17 **b. Organizational Structure**

18 CRESS employees report to a Senior Director, who in turn reports to
 19 the Vice President of Shared Services. CRESS has 40 management
 20 employees, two administrative employees, 103 International
 21 Brotherhood of Electrical Workers (IBEW)¹²-represented employees,
 22 and 5 Engineers and Scientists of California¹³-represented employees.
 23 CRESS is also supported by outside professionals for facilities
 24 management, program management, and project services.

25 **c. Activities Overview**

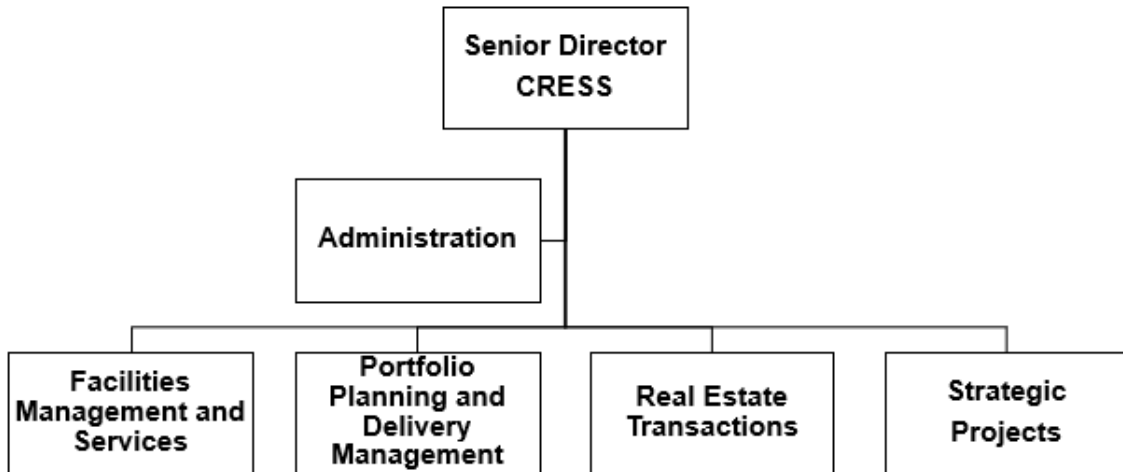
26 The CRESS organization, shown in Figure 5-3, is comprised of
 27 four functional areas: Facilities Management and Services; Portfolio
 28 Planning and Delivery Management; Real Estate Transactions; and
 29 Strategic Projects.

11 Exhibit (PG&E-7), Ch. 6.

12 <http://www.ibew.org/> (as of June 16, 2021).

13 <https://www.ifpte20.org/pge/> (as of June 16, 2021).

**FIGURE 5-3
CRESS ORGANIZATION**



1 **1) Facilities Management and Services**

2 Facilities Management and Services operates and maintains the
3 Company's facilities managed by CRESS. Included in Facilities
4 Management and Services are: (1) Facilities Services Operations
5 Center (FSOC); (2) Facilities Operations; (3) Critical Operations;
6 (4) Facilities Planning; and (5) Facilities Program groups.

- 7 • FSOC Group – Interfaces with PG&E employees for call intake
8 on facilities issues (e.g., broken facility equipment, such as
9 heating, plumbing, etc.) and handles general building office
10 requests (e.g., workstation re-configuration). This group
11 maintains the integrated work management process,
12 administrative services, and records.
- 13 • Facilities Operations – Provides services such as janitorial,
14 landscaping, plumbing, lighting, furniture, pest control, and
15 repairs and maintenance to CRESS's diverse portfolio of offices,
16 SCs, CSOs, and critical facilities.
- 17 • Critical Operations Group – Manages critical facilities that house
18 crucial core computer or customer support operations, such as
19 data centers, grid and gas control centers, and customer call
20 centers.

- 1 • Facilities Planning Group – Supports the Risk-Based Facility
2 Condition Assessment (RB-FCA) Program, described more fully
3 in Section B.1.e. of this chapter.
- 4 • Facilities Program Group – Manages PG&E’s conference
5 centers, training facilities, food services and lodging.

6 **2) Portfolio Planning and Delivery Management**

7 Portfolio Planning and Delivery Management provides strategic
8 portfolio and financial planning and governance, real asset
9 development, planning, design, and delivery services, compliance,
10 and execution support for the CRESS organization. The team
11 utilizes a vendor-leveraged model utilizing best in class designers,
12 general contractors, and key subcontractors to help plan, design,
13 manage, and deliver workspaces. Unlike other PG&E LOBs,
14 no work is self-performed other than planning, management, and
15 governance oversight.

16 **3) Real Estate Transactions**

17 Real Estate Transactions provides lease management and land
18 acquisition support for the CRESS organization.

19 **4) Strategic Projects**

20 Strategic Projects develops overall portfolio strategy and
21 manages strategic repositioning projects such as planning to
22 monetize real estate, relocating critical infrastructure in support of
23 the San Francisco headquarter relocation to Oakland, and
24 developing workplace needs in support of regionalization.

25 **d. Overview of Corporate Real Estate and PG&E’s Facility Portfolio**

26 The CRESS portfolio consists of 726 buildings at 215 different
27 locations. PG&E owns 88 percent of the buildings and leases
28 12 percent. The facilities in PG&E’s real estate portfolio are shown in
29 Table 5-2.

**TABLE 5-2
FACILITIES MAINTAINED BY CRESS**

Line No.	Facility Type	No. of Sites	No. of Buildings	Gross Square Feet (K)
1	Headquarters and Regional Offices	38	51	3,507
2	SCs	94	502	2,933
3	Stand-Alone CSOs	29	29	85
4	Special Purpose Sites	7	43	540
5	Critical Facilities	7	10	330
6	Material Warehouses	10	19	266
7	Other	30	72	595
8	Total	215	726	8,256

1 **1) Office Buildings**

2 CRESS manages Class A¹⁴ and Class B¹⁵ office space in a
3 multitude of locations. In addition to the GO complex in
4 San Francisco, PG&E has office facilities in Sacramento, Concord,
5 Fresno, San Jose, San Ramon, and other areas. In 2022, PG&E
6 will begin its move from the San Francisco GO to 300 Lakeside
7 Drive in Oakland.

8 **2) Service Centers (SC)**

9 PG&E manages 94 SCs that include more than 500 buildings
10 totaling 2.9 million square feet. SCs provide the necessary
11 light-industrial facilities for all local energy transmission and
12 distribution, system maintenance and construction, service planning,
13 customer service, and support team activities including material
14 storage, equipment parking, vehicle repair and maintenance, and
15 office space for local management and staff personnel. SCs located
16 in metropolitan areas generally house a staff ranging from 150 to

14 Class A office space is defined as: Most prestigious buildings competing for premier office users with rents above average for the area. Buildings have high quality standard finishes, state of the art systems, exceptional accessibility, and a definite market presence. www.boma.org (as of June 16, 2021).

15 Class B office space is defined as: Buildings competing for a wide range of users with rents in the average range for the area. Building finishes are fair to good for the area and systems are adequate, but the building does not compete with Class A at the same price. www.boma.org (as of June 16, 2021).

1 300 employees, while those in remote or less populated regions
2 typically house 25-50 employees.

3 **3) Customer Service Offices (CSO)**

4 PG&E currently has 65 CSO sites located in owned SCs and
5 office buildings, and in standalone leased sites. CSOs have
6 between 1 to 12 Customer Service Representatives who provide
7 face-to-face service to customers processing bill payments and
8 certain non-payment transactions. The Customer Care organization
9 oversees CSO operations with CRESS support to manage the
10 facilities.¹⁶

11 **4) Special Purpose Sites and Warehouses**

12 CRESS supports seven special purpose sites containing
13 43 buildings with over 540,000 square feet of space. These facilities
14 house dedicated operations such as the Corporate Records Center
15 in Brisbane, Billing Center in West Sacramento, Electric Safety
16 Academy in Livermore, Gas Safety Academy in Winters,
17 Applied Technology Services in Danville, and the San Ramon Valley
18 Conference Center in San Ramon. CRESS also maintains
19 PG&E's material distribution centers located in Fremont, Wheatland,
20 Emeryville, Pismo Beach, and Fresno totaling 266,000 square feet
21 of space.

22 **5) Critical and or Significant Facilities**

23 CRESS supports maintenance and facilities operations for
24 Critical Facilities which house crucial core computer or customer
25 support operations such as: data center in Fairfield; grid and gas
26 control centers in San Ramon, Rocklin, and Vacaville; electric
27 distribution control centers in Rocklin, Concord and Fresno; and
28 customer call centers in Sacramento and Fresno. These facilities
29 are essential to providing reliable and responsive service to electric
30 and gas customers.

¹⁶ See Exhibit (PG&E-6), Ch. 4 for further details on CSOs.

1 **e. Maintenance of Facility Assets**

2 CRESS manages janitorial, landscaping, building maintenance,
3 and repair work and oversees life cycle repairs and replacements
4 (e.g., heating, ventilation, and air conditioning (HVAC)), plumbing and
5 sewage systems, roofing, infrastructure, and grounds for all locations
6 within its portfolio.

7 CRESS utilizes the Facility Condition Index (FCI) and Risk-based
8 Facilities Condition Assessment (RB-FCA) methodologies developed in
9 2016 and detailed in the 2017 GRC. The methodologies provide a
10 systematic approach to assess facilities and develop maintenance and
11 lifecycle strategies using data from the FCI and RB-FCA. Both the FCI
12 and the RB-FCA methodologies are described in more detail below.

13 **1) Facilities Condition Index¹⁷**

14 FCI is a standard facility management industry benchmark used
15 to objectively assess the current and projected condition of a
16 building asset.

17 **2) Risk-Based Facility Condition Assessment¹⁸**

18 The RB-FCA Program is an industry-proven, proactive asset
19 management process to systematically review the age and condition
20 of major building systems and components. The RB-FCA allows the
21 Company to monitor, assess, plan, and make repairs on building
22 systems and components on a risk rank basis before they fail.

23 **3) Benefits of RB-FCA**

24 PG&E prioritizes work in its Facilities Condition Assessment
25 investment plans to:

- 26 • Confirm that the highest priority work gets done;

17 The FCI is a tool that was first published in 1991 by the National Association of College and University Business Officers in *Managing the Facilities Portfolio*. The principal author of the book was Applied Management Engineering, Inc., located in Virginia Beach, Virginia.

18 Exhibit (PG&E-7), WP 5-19, Risk-Based Facility Condition Index.

- 1 • Prioritize and direct funds to the areas of greatest risk: namely,
2 safety, compliance, building systems loss, and/or business
3 interruptions;
- 4 • Validate the need for replacement of sizable portions/elements
5 (systems) of property;
- 6 • Identify funding commitments necessary to keep facilities
7 operational and recognize the associated risk of these projects
8 are deferred;
- 9 • Group similar projects (e.g., roofing, paving, etc.) to generate
10 economies of scale and minimize business interruptions; and
- 11 • Improve sustainability with new systems and office upgrades.

12 **f. Key CRESS Initiatives**

13 **1) Transition from SFGO to Oakland Lakeside**

14 In the 2020 GRC, PG&E identified emergent safety and
15 compliance related work for the GO that was to be performed for
16 employee and public safety should PG&E decide to maintain its
17 SFGO campus. This included: (1) GO Façade Restoration; and
18 (2) GO Electrical and Mechanical Safety Upgrades, and
19 (3) Additional building system replacement work for GO consisting
20 of building controls and alarms, heating and ventilation, and air
21 handling unit upgrades. Since that time, PG&E has decided to sell
22 the SFGO complex. Accordingly, all work forecast in the 2020 GRC
23 other than required repairs to maintain operations has been deferred
24 or cancelled.

25 As part of its Chapter 11 reorganization plan, PG&E worked
26 collaboratively with the CPUC and the Bankruptcy Court to develop
27 and approve a plan to sell the SFGO complex and enter into a lease
28 with an option to purchase 300 Lakeside in Oakland. PG&E
29 successfully negotiated an intent to lease agreement with
30 TMG Partners in June 2020 for 300 Lakeside pending TMG's
31 purchase of the 300 Lakeside asset. That transaction between
32 TMG and the seller closed in October 2020, followed by PG&E
33 executing the lease with purchase option transaction.

1 Under the terms of the agreement, PG&E has the option to
2 purchase the 300 Lakeside asset in 2023 per terms of the
3 lease/purchase option agreement for a forecasted and allocated
4 amount of \$892 million based on a preliminary cost buildup including
5 cost to purchase and redevelop the site to PG&E specifications.

6 PG&E filed an application with the Commission under Section
7 (§) 851 of the Public Utilities Code to sell SFGO.¹⁹ On May 26,
8 2021, PG&E filed a Joint Motion for Adoption of Amended
9 Settlement Agreement in its §851 proceeding. Among other things,
10 the Settlement Agreement proposes that the Commission should
11 find that: (1) the proposed SFGO sale satisfies all Section 851
12 requirements and should be authorized; (2) PG&E's proposed
13 ratemaking treatment (as modified per the Settlement Agreement)
14 should be found reasonable; (3) PG&E's headquarters real estate
15 strategy should be found reasonable; (4) the terms of the Lakeside
16 Building and Purchase Option Agreement should be found
17 reasonable; and (5) the estimated Lakeside Building moving costs,
18 lease costs, and operations and maintenance costs should be found
19 reasonable. PG&E served supplemental testimony as well as
20 updated workpapers on June 11, and three additional exhibits on
21 July 7. The matter was deemed submitted on July 16, and the
22 Commission approved the amended settlement agreement on
23 August 19, 2021.²⁰

24 PG&E's 2023 capital forecast contains the forecasted purchase
25 option amount pending exercising the option. Consistent with the
26 decision approving the sale, PG&E will file a petition for modification
27 within 90 days of exercising its purchase option, wherein PG&E will

19 See A.20-09-018. Terms of the proposed sale, outline of the 851 process, timing for transaction close, and other areas of the transaction have been provided to the CPUC within the 851 process testimony and data responses which can be found by entering the application number into PG&E's regulatory website: <https://pgera.azurewebsites.net/Regulation/search> (as of June 16, 2021).

20 See Decision Authorizing Pacific Gas and Electric Company's Sale of its San Francisco General Office Complex and Related Matters, D.21-08-027, issued August 19, 2021 in A.20-09-018.

1 request a reasonableness review and cost recovery of actual costs
2 incurred in connection with the move to the Lakeside Building.

3 **2) 2023 GRC Service Center Investment Plan**

4 PG&E's Service Centers (SC) are core to maintaining customer
5 service and support for all field crews, equipment, vehicles, and
6 materials staging. Approximately 75 percent of the Company's SCs
7 are over 45 years old and are at the end of their design lifespan.
8 Although all were compliant to the codes in place at the time of
9 development, many do not fulfill current requirements related to fire
10 and life safety, seismic performance, and environmental
11 compliance. The locations and sizes of many current centers were
12 based on customer profiles dating back more than 40 years. In
13 many cases, local customer support needs have grown
14 tremendously due to urban sprawl and suburban development
15 without the center expanding in proportion to demand. Many SCs
16 were originally located in industrial or light-industrial areas on the
17 outskirts of communities, but now are immediately adjacent to
18 residential and/or commercial developments which causes safety
19 and community engagement issues. Lastly, trucks and equipment
20 have grown over time, and when coupled with the materials storage
21 at a site, severely constrain site logistics.

22 The 2023 GRC request focuses on continuing the investment in
23 PG&E's SCs to support its diverse customer needs, supporting
24 system hardening and enhanced emergency response, and
25 resolving individual safety and/or compliance items at the respective
26 sites.

27 **a) Service Center Investment Plan – Background**

28 PG&E plans to continue to invest in its SC portfolio as these
29 assets are critical to providing and maintaining customer energy
30 service and support

31 Since early 2019, CRESS has focused its strategic
32 investments at selected PG&E-owned SC sites while continuing
33 to monitor opportunities to fulfill the highest priority consolidation

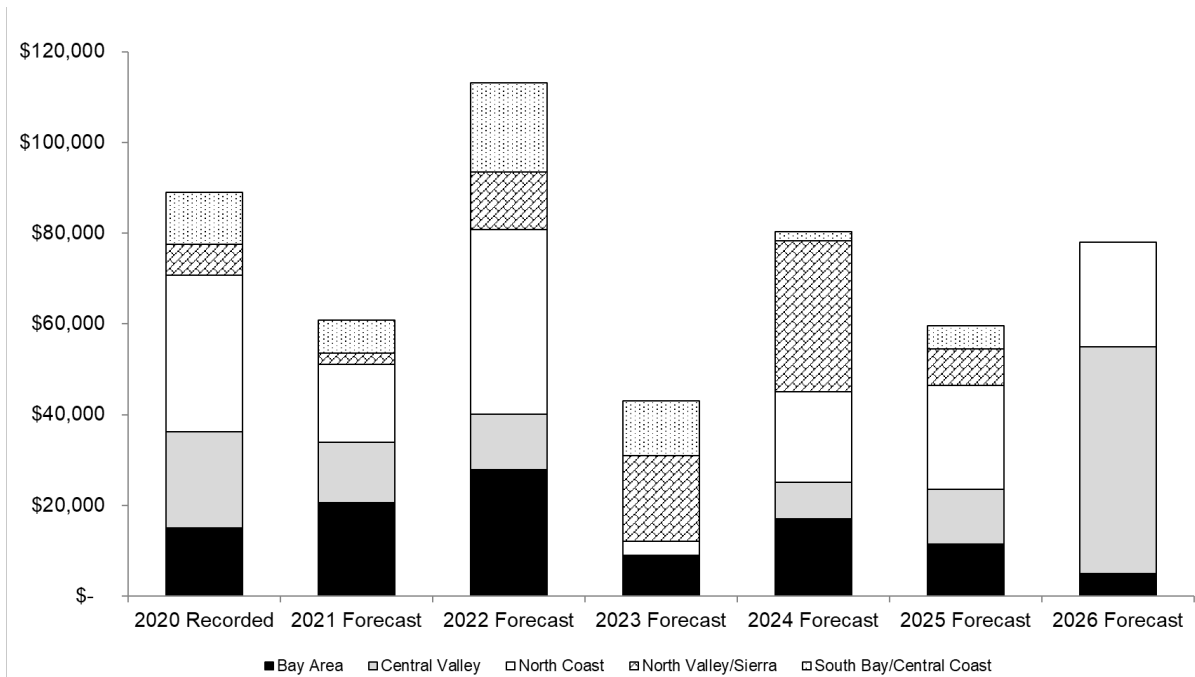
1 efforts should an opportunity come available. The focus has
2 continued to be on enhancing safety, reducing risk, and
3 maintaining compliance as well as maintaining customer
4 support and supplementing wildfire risk reduction and response.

5 **b) 2023 GRC Service Center Investment Plan – Investments**

6 PG&E plans to invest approximately \$260.8 million²¹
7 in capital over the 2023-2026 timeframe for the Service Center
8 Investment Plan, as shown in Figure 5-4. This capital
9 investment will target opportunities at several existing centers to
10 reduce operational costs, enhance safety and logistics by
11 creating efficient layouts, resolve site environmental concerns to
12 maintain compliance, reduce threat of physical attack by
13 enhancing perimeter security and fencings, and enable key
14 Electric and Gas system hardening as well as emergency
15 response efforts.

²¹ Exhibit (PG&E-7), WP 5-116, Project Summary: North Coast Region Service Center Investment. Exhibit (PG&E-7), WP 5-121, Project Summary: North Valley and Sierra Region Service Center Investment. Exhibit (PG&E-7), WP 5-127, Project Summary: Bay Area Region Service Center Investment. Exhibit (PG&E-7), WP 5-134, Project Summary: Central Coast Region Service Center Investment. Exhibit (PG&E-7), WP 5-138, Project Summary: Central Valley Region Service Center Investment.

**FIGURE 5-4
SC INVESTMENTS BY REGION – CAPITAL
(THOUSANDS OF NOMINAL DOLLARS)**



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c) Service Center Investment Plan – Benefits

The Service Center Investment Plan will continue to provide several operational and risk-related benefits to PG&E’s customers and employees, including:

- Immediate removal of safety hazards related to congested yards, poor traffic circulation, poor visibility and less than optimal SC layouts;
- Reduction of risks related to fire, flood, seismic, and physical attack; and
- Maintaining compliance with all applicable codes and standards such as the use of mobile trailers at various centers, storm water runoff, and the storage of hazardous materials.

Table 5-3 shows the associated cost of the Service Center Investment Plan.

TABLE 5-3
SERVICE CENTER INVESTMENT PLAN
2021-2026 FORECAST
(THOUSANDS OF NOMINAL DOLLARS)

Line No.	Service Center Investment Plan	Forecast						Total	Workpaper Reference
		2021	2022	2023	2024	2025	2026		
1	Capital (MWC 23)	\$60,778	\$113,122	\$43,021	\$80,300	\$59,500	\$78,000	\$434,721	WP Table 5-13
2	Expense (MWC JH)	–	–	–	–	–	–	–	WP Table 5-3
3	Total	\$60,778	\$113,122	\$43,021	\$80,300	\$59,500	\$78,000	\$434,721	

1 **d) 2023 GRC Service Center Investment Plan – Details**

2 **i) Prior SC Investment Progress**

3 PG&E identified in the 2020 GRC SCs that required
4 investment in terms of enhancing safety, reducing risk, and
5 maintaining compliance. PG&E completed projects at the
6 Chico and Redding SCs in 2020 and is in process for others
7 in 2021 and 2022.

8 **ii) Service Center Investment Plans for Current Focus of**
9 **Operations**

10 PG&E's plan to invest in SCs prioritizes locations that
11 directly support its focus on wildfire mitigation including
12 distribution system inspection and repairs, vegetation
13 management, and grid hardening. The investment will
14 target risk reduction and resolution of safety and compliance
15 items at priority sites which may include the following
16 aspects:

- 17 • Incorporating FAU items to resolve facility features that
18 have exceeded useful life;
- 19 • Reviewing and resolving planned maintenance
20 (e.g., roofing, heating, and cooling, power, paving,
21 domestic water, sewer, etc.) to ensure the site has
22 adequate remaining useful life to accommodate planned
23 operations;

- 1 • Ensuring perimeter security and access control systems
2 and features are compliant with PG&E’s Corporate
3 Security standards;²²
- 4 • Resolving any seismic stability concerns, particularly
5 with racking and other vertical storage features;
- 6 • Resolving compliance issues that may include use
7 permits for temporary facilities, use of trailers for office
8 spaces, use of cargo vans for local storage, etc.;
- 9 • Resolving environmental concerns, particularly those
10 related to storm water runoff from treated wood poles;
11 and
- 12 • Ensuring each center has appropriate and adequate
13 emergency response capabilities such as an event
14 response or storm room, adequate laydown for
15 additional materials and crew staging, and backup
16 power to maintain operations during an outage.

17 The approach will be to assess the respective site
18 against planned operations, list proposed investments,
19 risk/rank them for implementation, and deliver as much
20 target value as possible based on available funds.
21 Estimates for each site are presumptive at this point based
22 on available information at this time. To ensure an
23 equitable distribution of funds to each priority site, PG&E
24 plans to update each facility to the extent possible within the
25 budgeted amounts per site. This is consistent with the
26 investment approach outlined in the 2020 GRC.

27 **e) North Regions^{23,24}**

28 Locations within PG&E’s northern region (includes
29 both proposed regionalization regions: North Coast, and

22 Exhibit (PG&E-7), WP 5-146, PG&E’s Enterprise Perimeter Barrier/Fencing Standard.

23 Exhibit (PG&E-7), WP 5-116, Project Summary North Coast Service Center Investment.

24 Exhibit (PG&E-7), WP 5-121, Project Summary North Valley and Sierra Region Service Center Investment.

1 Northern Valley and Sierra²⁵), which has significant wildfire risk
2 mitigation Tier 2 and Tier 3 areas,²⁶ include the following sites:

- 3 • Auburn, Burney, Chico, Davis, Eureka, Napa, Redding,
4 Sacramento, San Rafael, Santa Rosa, and Ukiah
- 5 • Typical work to be performed at each site includes:
 - 6 – Resolving scheduled or deferred maintenance;
 - 7 – Installing site paving, storm, and domestic water
8 systems;
 - 9 – Installing fixed emergency generation or connection
10 points for portable generators to help maintain
11 operations during a power outage;
 - 12 – Installing perimeter fence updates to current Corporate
13 Security Standards; and
 - 14 – Updating pole and/or soils storage areas to
15 accommodate planned volume and maintain
16 environmental compliance.

17 **f) Bay Area Region²⁷**

18 The Bay Area Region will have critical deferred
19 maintenance supported by the FAU Program and will include
20 the following locations: Antioch, Cupertino, Fremont, Livermore,
21 San Carlos, Oakland, and San Francisco. One site within this
22 region will be renovated to support planned operations.

23 **g) Central Coast Region²⁸**

24 The Central Coast Region, also home to significant Tier 2
25 and Tier 3 wildfire mitigation areas, will include the following
26 locations: Salinas, San Luis Obispo, and Santa Cruz.

25 Exhibit (PG&E-7), WP 5-218, Proposed Five Regions for Regionalization Map.

26 Exhibit (PG&E-7), WP 5-217, Wildfire Safety Operations Center (WSOC) Map. Tier 2 elevated and Tier 3 extreme are fire zones defined by PG&E's WSOC.

27 Exhibit (PG&E-7), WP 5-127, Project Summary Bay Area Region Service Center Investment.

28 Exhibit (PG&E-7), WP 5-134, Project Summary: Central Coast Region Service Center Investment.

1 **h) Central Valley Region²⁹**

2 The Central Valley, which benefited from recent
3 development at Lemoore, Fresno, and Merced will see
4 investment at the following sites: Lemoore, Modesto,
5 and Stockton.

6 **3) Regional Office Investment Plan**

7 To continue to drive affordability with the CRESS office portfolio,
8 PG&E plans to implement a regional office consolidation program
9 within one of its regional office portfolios. The modeled portfolio is
10 comprised of five leased sites. PG&E's intent is to develop a site to
11 PG&E's workplace standards to consolidate all operations at the
12 current leased facilities to one new owned center.³⁰

13 Based on historical costs and utilizing CRESS's cost estimating
14 models, PG&E estimates \$117 million for development of the new
15 center. Program validation and site search activities will commence
16 in 2023 with site development and delivery to be completed by
17 2027. PG&E estimates annual operating expense savings to be
18 \$5.5 million.

19 Table 5-4 compares the associated operating expenses
20 between keeping the existing buildings and building the new
21 regional office.

²⁹ Exhibit (PG&E-7), WP 5-138, Project Summary: Central Valley Region Service Center Investment.

³⁰ Exhibit (PG&E-7), WP 5-157, Project Summary: Regional Office.

**TABLE 5-4
REGIONAL OFFICE PLAN
(THOUSANDS OF NOMINAL DOLLARS)**

Line No.	Building (Existing)	RSF	Seats	HC	Owned/Leased	OPEX
1	Site A	49,334	310	256	Leased	\$1,933
2	Site B	20,301	106	92	Leased	417
3	Site C	26,523	169	144	Leased	670
4	Site D	3,038	11	10	Leased	73
5	Site E	94,560	501	446	Leased	3,248
6	Existing Totals	193,757	1,097	948		\$6,341

Line No.	Building (New)	Estimated RSF	Estimated Seats	Estimated HC	Owned/Lease	Estimated OPEX/Year
7	Regional Office A – Site TBD	89,640	498	570	Owned	\$418
8	Regional Office B – Site TBD	59,130	405	405	Owned	275
9	Potential CSO – Site TBD	4,145	11	11	Leased	116
10	New Totals	152,915	914	986	–	\$809
11	New vs. Existing TOTAL	(40,842)	(183)	38	–	\$(5,532)

4) Customer Service Office Investment Plan – Overview

a) CSO³¹

PG&E currently has 65 CSOs in owned and leased sites. A portion of the leased sites do not meet PG&E's seismic requirements and were in process of determining appropriate relocation opportunities when the CSOs were closed in early 2020 as a pandemic mitigation. Once the CSOs are approved to reopen, CRESS will reinitiate its plan to relocate sites that do not meet PG&E operating criteria.

5) LOB Operational Initiatives

PG&E's CRESS team works closely with all lines of business to provide the necessary workspace to accomplish respective business goals. CRESS worked with the Aviation Services Department to develop a concept and estimate for a centralized aviation operations center adjacent to one of Northern California's regional public airports, and to develop a drone operations and maintenance facility

³¹ See Exhibit (PG&E-6), Ch. 4 for further details on CSOs.

1 at an existing PG&E owned site. The business case for this effort is
2 contained in Exhibit (PG&E-7), Chapter 2. CRESS has provided an
3 initial estimate of \$25 million to support the Aviation plan.³²

4 **6) Regionalization**

5 CRESS has supported Regionalization discussions related to
6 how potential regional teams may be accommodated with adequate
7 workspace within each region. PG&E filed an application for
8 approval of its Regionalization Proposal on June 30, 2020 and the
9 general premise for this GRC period is PG&E will utilize its existing
10 portfolio as-is to accommodate the proposed regional management
11 teams. No cost forecast is expected to expand existing or develop
12 new centers. Detailed information can be found in the Application
13 for Approval of Regionalization Proposal.³³

14 **7) Facility Asset Upkeep Program**

15 CRESS uses proactive maintenance practices to optimize
16 life cycle costs and limit unplanned business interruptions due to
17 system or equipment failure. This process helps minimize costly
18 reactive maintenance and unplanned business interruptions.
19 Regular maintenance is essential for enhancing safety, reducing
20 risk, and maintaining compliance at PG&E's facilities.

21 To assist in developing investment priorities within existing
22 facilities and systems, PG&E relies on its RB-FCA Program which
23 develops a relative score for each facility known as the FCI.
24 PG&E uses this model and score to determine planned investment
25 referred to as FAU.

26 This approach is particularly appropriate for PG&E based on the
27 aging of the CRESS managed portfolio (shown in Table 5-5).³⁴

32 Exhibit (PG&E-7), WP 5-153, Project Summary: Aviation Operations Center.

33 See A.20-06-011. The Application for Approval of Regionalization Proposal can be found by entering the application number into PG&E's regulatory website: <https://pgera.azurewebsites.net/Regulation/search> (as of June 16, 2021).

34 The average age of PG&E's buildings is 40 years. More than 60 percent of PG&E's facilities are more than 30 years old. For example, PG&E's Davis Service Center is 94 years old.

1 CRESS utilizes predictive maintenance items coupled with annual
 2 visual inspections to qualify and quantify remaining useful life for
 3 building systems and components to identify and prioritize
 4 investments required to maintain operations.

**TABLE 5-5
 AGE OF PG&E FACILITY PORTFOLIO**

Line No.	Building Age	No. of Buildings	Percent of Total
1	0-10 Years	98	16%
2	11-20 Years	66	10%
3	21-30 Years	78	12%
4	31-40 Years	137	22%
5	40+ Years	248	40%
6	Unspecified	99	–

5 **a) FAU Maintenance Plan Investments**

6 FAU spend is driven by facility age and remaining useful life
 7 of systems and components and is needed to:

- 8 • Replace or upgrade the electrical, lighting, mechanical, and
 9 plumbing systems;
- 10 • Replace or renovate building infrastructure systems and
 11 subsystems such as asphalt, roofing, fire
 12 detection/prevention, fencing, and painting; and
- 13 • Replace or remediate interior building components, such as
 14 doors, ceilings, and floor coverings.

15 The National Research Council recommends annual
 16 maintenance expenditures ranging between 2-4 percent of
 17 replacement value.³⁵ The replacement value of PG&E's owned
 18 portfolio is approximately \$8.7 billion,³⁶ excluding land.

19 Therefore, the annual maintenance expenditure for PG&E
 20 should range between \$174 and \$348 million in expense and

35 Exhibit (PG&E-7), WP 5-24, for "Committing to the Cost of Ownership: Maintenance and Repair of Public Buildings," National Research Council, National Academy Press, 1990.

36 Exhibit (PG&E-7), WP 5-92, Replacement Value of CRESS-Managed Buildings.

1 capital. PG&E's requested funding is below this range and
2 appropriate for its portfolio.

3 The expense forecast for FAU activities is \$4.0 million in
4 2023. Capital expenditures for 2023-2026 are \$37.2, \$41.7,
5 \$42.0, and \$30.0 million, respectively. Costs are associated
6 with investment that will occur in the 2023-2026 GRC timeframe
7 as part of Service Center Investment Plans and will be a portion
8 of the overall projects which are primarily capital and will only
9 occur if capital funding is available for those projects.

10 **8) Safety, Security, and Compliance**

11 To address structural and non-structural safety and
12 environmental compliance risks associated with occupied and
13 critical facilities, CRESS will implement projects that focus on safety
14 and regulatory compliance. The projects address seismic study
15 results with seismic renovations and repairs, racking and vertical
16 storage³⁷ issues along with sediment and rainwater runoff from
17 mismanaged spoils and materials storage.³⁸

18 For physical security concerns, CRESS will continue to ensure
19 perimeter security and access control systems and features are
20 compliant with PG&E's Corporate Security Department's
21 Standard.³⁹

22 Capital expenditures for 2023-2026 are \$47.5, \$44.0, \$44.0,
23 and \$34.0 million, respectively. This is a 20 percent increase from
24 the 2020 baseline year of \$39.5 million.

25 **9) Fire Risk Mitigation Memorandum Account (FRMMA)**

26 Capital expenditures for 2023-2026 are \$0 million since the
27 program will complete in 2022. This is a 100-percent decrease from
28 the 2020 baseline year of \$38.4 million. The capital expenditures
29 forecast for 2021 and 2022 are \$41.0 million and \$21.0 million

³⁷ Exhibit (PG&E-7), WP 5-163, Project Summary: RAMP Seismic Improvements.

³⁸ Exhibit (PG&E-7), WP 5-149, Project Summary: Environmental Compliance Program.

³⁹ Exhibit (PG&E-7), WP 5-144, Project Summary: System Service Center Security Program.

1 respectively. Detailed information on the work and costs recorded
2 to the FRMMA can be found in Exhibit (PG&E-7), Chapter 5,
3 Attachment A.

4 **2. Risk Assessment and Mitigation Phase (RAMP) Risks**

5 **a. Real Estate Facilities Failure Risk**

6 **1) Risk Overview**

7 The Real Estate Facilities Failure Risk is the risk of an event
8 which causes a building, facility, or property within PG&E service
9 area to be deemed unsafe, or inaccessible for operation or
10 occupancy, such that PG&E is unable to use the building or property
11 to support operational needs. Key risk drivers include a seismic,
12 flood, landslide, building fire, or physical security event. The scope
13 of this risk includes all PG&E owned or leased buildings and
14 facilities. All other non-facility-related PG&E assets, such as electric
15 and gas transmission and distribution systems, dams, and
16 substations are covered under other risks.

17 **2) Updates to PG&E's RAMP Report**

18 Announced in June 2020, PG&E will relocate the San Francisco
19 General Office to Oakland. Therefore, PG&E determined that an
20 analysis of the Oakland 300 Lakeside Building should be performed
21 to determine the risk score for the building as a separate tranche.
22 The Oakland Lakeside Building was added to the overall risk model
23 replacing the tranches for the San Francisco 77 Beale and
24 245 Market buildings. Based on the updated model, PG&E could
25 then reconfirm the risk score baseline from which PG&E can
26 develop a risk mitigation strategy which would include proposed
27 actions and costs resulting in Risk Spend Efficiency (RSE) and
28 Risk Reduction. Information from the updated analysis is described
29 below.

30 **3) Feedback from Safety Policy Division**

31 On November 25, 2020, the Safety Policy Division (SPD) issued
32 its Staff Evaluation Report on PG&E's 2020 Risk Assessment and
33 Mitigation Phase (RAMP) Application (A.) 20-06-012. SPD

1 recommended that PG&E provide a full analysis of such a move,
2 including any risks associated with the transition, and how it might
3 affect the risks analyzed throughout the 2020 RAMP. This analysis
4 of Oakland to replace the SFGO within PG&E's model was also a
5 recommendation of the Safety Policy Division.

6 In response to SPD's feedback, PG&E added the
7 Oakland Lakeside Building as a tranche to our model and calculated
8 a baseline risk score for Oakland. The baseline risk score for
9 Oakland represents the building as-is which is a contemporaneous
10 code-compliant high-rise multi-tenant commercial office building.
11 The risk score model algorithm has several variables such as:
12 (a) location to determine local ground characteristics and proximity
13 to a known fault; (b) building type and structure (i.e., high-rise and
14 steel moment frame); and (c) planned headcount resident at the
15 time of a seismic event or other risk. PG&E's prior model showed a
16 risk score for 77 Beale of 67.95, 245 Market of 5.87, and 45 Beale of
17 0.30 as separate tranches. The range in risk scores between
18 77 Beale, 245 Market, and 45 Beale is primarily attributed to:
19 (a) difference in building height (16 vs. 32 vs. 3 above-ground
20 occupied floors); (b) seismic performance characteristics (77 Beale
21 is built to contemporaneous 1970s code and 245 Market was
22 seismically-upgraded in the 1990s); and (c) density of personnel
23 (77 Beale has approximately 2,000 employees assigned
24 vs. 245 Market has approximately 1,000 employees assigned
25 vs. 45 Beale with less than 50). Using the same algorithm for
26 300 Lakeside, the baseline risk score is 101. The increase in risk
27 score for Oakland, as compared to the SFGO complex, is primarily
28 driven by Oakland being roughly the same height and performance
29 level as 77 Beale, but with 33 percent more employees potentially
30 present in one building versus the three modeled SFGO buildings
31 during a risk event.

32 To further provide the comparison of 77 Beale to 300 Lakeside,
33 PG&E once contemplated consolidating all SFGO employees to
34 77 Beale and offering 245 Market for surplus. Placing all employees

1 in 77 Beale (as compared to having them split between 77 Beale
2 and 245 Market) results in a risk score of 112 vs. a score of 101 for
3 the Oakland building.

4 **4) Real Estate Facilities Risk Overview**

5 As previously stated, the Real Estate Facilities Failure Risk is
6 the risk of an event which causes a PG&E building, facility, or
7 property to be deemed unsafe or inaccessible for operations.
8 As filed in the PG&E's 2020 RAMP report, exposure to this risk was
9 based on a tranche-level analysis of 50 representative buildings
10 from the subset of facilities managed by CRESS that included high-,
11 mid-, and low-rise office buildings, SCs, conference centers, and
12 critical facilities in predominately high seismic areas of the state.
13 The risk model analysis indicates that the expected number of
14 events per year is approximately 8 for this risk. 62 percent of the
15 risk events are seismic events while physical security, flood,
16 landslide, and building fire account for 38 percent of the risk events.
17 Seismic risk also makes up more than 99 percent of the total risk
18 impact score and physical security, flood, landslide, and building fire
19 events comprise 26 the remaining portion of the risk score. Based
20 on this analysis, PG&E's planned mitigations primarily address
21 seismic risk events.

22 PG&E's prior model that included 77 Beale, 245 Market and
23 45 Beale showed 71.8 percent of the tranche-level risk was related
24 to these two high-rise, highly populated buildings located in a
25 relatively high-seismic zone coupled with a low-rise relatively lightly
26 populated building. 12.3 percent of the tranche-level risk is related
27 to five mid-rise buildings, and the remaining 15.9 percent is based
28 on the sample of single story or low-rise buildings found in SCs,
29 office complexes, and other facilities. Since the RAMP filing,
30 PG&E's updated model removed 77 Beale, 245 Market and
31 45 Beale and now includes Oakland 300 Lakeside.
32 Oakland Lakeside is now the highest risk tranche with 77.6 percent
33 of the overall modeled risk. The remaining 22.4 percent risk
34 remains the same as the remaining tranches were not changed.

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The updated 48 tranche model has slightly changed certain values in the bowtie for this risk⁴⁰ (shown in Table 5-6 below):

**TABLE 5-6
REAL ESTATE FACILITIES FAILURE**



* Risk Score represents Test Year Baseline Risk Score for 2023 (i.e., pre-mitigation risk score for 2023, post 2020-2022 mitigations, post all controls)

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The prior bowtie representing the 50-tranche model showed a total risk score of 97, as compared to the updated score of 128. Driving events reduced from 8.2 to 7.4 per year, and aggregated outcomes increased from 12 to 17.

Although the increase in total risk score appears material (from 97 to 128) to the overall risk reduction effort, it underscores that the Real Estate Failure Risk is solely grounded in the fact that PG&E, like many other greater San Francisco Bay Area companies, house centralized employee workforces in metropolitan high-rise commercial office buildings. This is primarily a business decision based on the pool of qualified professional, technical, and support personnel in large metropolitan areas served by robust urban and suburban transit to allow employees to travel to the office.

⁴⁰ This bowtie reflects an updated 48 building model that removed SFGO buildings and included 300 Lakeside Oakland. This information has not been filed with RAMP testimony at this writing but will be included in the next RAMP update.

1 To reduce seismic risk within the CRESS portfolio, CRESS
2 plans to incrementally invest in structural and non-structural seismic
3 enhancements to its owned buildings. The Oakland Lakeside
4 transaction contains investment to perform a voluntary upgrade (not
5 required by code or statute but prudent for an owner/occupier of a
6 high-rise office building) to increase seismic performance of the
7 building from its current code-compliant condition and seismic
8 mitigation capabilities.

9 **5) Continuation of Foundational Activities**

10 Between 2020 and 2022, PG&E will conduct foundational
11 activities such as surveying buildings that meet criteria related to
12 potential seismic performance (i.e., location, building type, age).
13 The buildings or structures will be reviewed to determine if the
14 structures should be renovated or replaced either by redevelopment
15 or relocation (relocation is particularly related to leased facilities).
16 PG&E will begin renovation or replacing targeted facilities identified
17 during the foundational survey starting in 2023 or sooner depending
18 on the implementation of CRESS SC Investment Program as
19 outlined in the 2020 GRC.

20 Detailed information on this risk as modeled in the RAMP can
21 be found in Chapter 14 of the 2020 RAMP Filing.

22 **6) Controls**

23 PG&E has not changed the Real Estate and Facilities Failure
24 risk controls since it submitted its RAMP Report. See Table 5-7 for
25 an overview of the controls. Detailed information about our risk
26 controls can be found in our RAMP Filing and Workpaper
27 Table 5-21.⁴¹

⁴¹ Exhibit (PG&E-7), WP 5-165, Table 5-21: Real Estate and Facilities Failure Risk: Forecast Control Costs.

**TABLE 5-7
REAL ESTATE FACILITIES FAILURE
CONTROLS AND MITIGATIONS**

Controls		
1	C1 – Regional Optimization	Develop regional office optimization strategy that prioritizes renovations of or relocations from buildings/workplaces that present risks of seismic, flood, landslide, fire, and physical attack events.
2	C2 – SC Optimization	Harden SC facilities by updating perimeter security and fencing to current PG&E standards, upgrading site drainage capabilities and storm water runoff infrastructure, and replacing non permitted temporary or legacy structures with current code compliant structures to control for seismic, flood, landslide, fire, and physical attack drivers.
3	C3 – CSO Optimization	When determining which CSOs to close or relocate, factor in potential seismic, flood, landslide, fire, and physical security risks.
4	C4 – Facilities Management Preventive Maintenance Program	Preventive Maintenance programs include inspections of fire alarms, protection and detection systems, and validating all required maintenance and updates. This control primarily impacts fire and physical attack drivers.
5	C5 – Site Design Structural and Engineering Reviews	All new and retrofitted PG&E facilities must be built to current local codes and ordinances. This control impacts seismic, flood, landslide, and fire drivers.
6	C6 – Segregation of Assets	Place PG&E's critical assets in different areas or regions ensuring a local disaster does not affect all facets of critical operations. This control primarily impacts the seismic or flood driver.
7	C7 – Facility Inspection Program	Inspections include reviews of safety housekeeping items including potential fire hazards, and non-structural seismic issues. This control impacts seismic, fire and physical attack drivers.
8	C8 – Security System Hardening	Identify areas for security system hardening, such as installing higher fencing, automatic gates and/or enhanced perimeter surveillance devices. This control impacts the physical attack driver.
Mitigation		
9	M6 – Renovate or Relocate Facilities Other than SFGO	<p><u>Effort 1: Renovate or Relocate Low Rise Facilities</u></p> <p>PG&E will systematically evaluate and retrofit or relocate all low-rise facilities such as SCs and office buildings that do not meet a minimum seismic performance level to reduce seismic risk.</p> <p><u>Effort 2: Renovate or Relocate Mid Rise and High-Rise Structures (Other Than SFGO)</u></p> <p>PG&E will review midrise and high-rise structures against the minimum seismic performance criteria and renovate or relocate facilities accordingly.</p>

1 **7) Mitigations**

2 PG&E has not changed the Real Estate and Facilities Failure

3 risk mitigations since it submitted its RAMP Report. For this

4 GRC cycle, the report proposes one mitigation that consists of

5 two concurrent efforts. Table 5-7 provides an overview of that

6 mitigation plan and Tables 5-8 and 5-9 below lists its recorded and

1 forecast costs. Detailed information about our risk mitigations can
2 be found in our RAMP Filing and workpapers. Workpaper
3 Table 5-22 and 5-23⁴² shows the estimated costs for mitigations in
4 RAMP, compared to the estimated costs in the GRC.

5 PG&E calculated two RSEs for the Real Estate and Facilities
6 Failure mitigation:

7 a) Renovate or Relocate Facilities Other than SFGO [Materials
8 Racking]: 0.04

9 b) Renovate or Relocate Facilities Other than SFGO [Structural
10 and Non-Structural Building]: 0.38

⁴² Exhibit (PG&E-7), WP 5-166, Table 5-22: Real Estate and Facilities Failure Risk: Comparing Estimated Risk Costs in RAMP to Forecast Costs in the GRC – RAMP Costs. Exhibit (PG&E-7), WP 5-167, Table 5-23: Real Estate and Facilities Failure Risk: Comparing Estimated Risk Costs in RAMP to Forecast Costs in the GRC.

**TABLE 5-8
REAL ESTATE AND FACILITIES FAILURE
RECORDED AND FORECAST MITIGATION COSTS 2020-2026 – CAPITAL
(THOUSANDS OF NOMINAL DOLLARS)**

Line No.	Mitigation No. (2023 GRC)	Mitigation Name (2023 GRC)	2020 Rec. Adj.	2021 Forecast	2022 Forecast	2023 Forecast	2024 Forecast	2025 Forecast	2026 Forecast	Total
1	REFFL-M006	Renovate or Relocate Facilities Other than SFGO	\$2,955	\$8,788	–	\$30,000	\$30,000	\$30,000	\$20,000	\$121,743
2		Total	\$2,955	\$8,788	–	\$30,000	\$30,000	\$30,000	\$20,000	\$121,743

**TABLE 5-9
REAL ESTATE AND FACILITIES FAILURE
RECORDED AND FORECAST MITIGATION COSTS 2020-2023 – EXPENSE
(THOUSANDS OF NOMINAL DOLLARS)**

Line No.	Mitigation No. (2023 GRC)	Mitigation Name (2023 GRC)	2020 Rec. Adj.	2021 Forecast	2022 Forecast	2023 Forecast	Total
1	REFFL-M006	Renovate or Relocate Facilities Other Than SFGO (Retrofit/Rebuild Facilities)	\$329	\$360	\$1,860	\$1,856	\$4,405
2		Total	\$329	\$360	\$1,860	\$1,856	\$4,405

1 Not listed in the above table of forecast investments is the effort
 2 proposed by TMG (The Lakeside Building project developer) and
 3 approved by PG&E to enhance the seismic performance of the
 4 building. The enhancements allow for increased performance to
 5 maintain life safety or collapse prevention following a seismic event.
 6 The cost for this work will be contained in the capital investment
 7 update following purchase of the building by PG&E in 2023.

8 C. Activities and Costs by MWC

9 1. Expense MWCs

10 Table 5-10 lists the expense MWCs utilized by CRESS.

**TABLE 5-10
 REAL ESTATE MWCS
 EXPENSE**

Line No.	MWC	Key Initiatives
1	BI	Maintain Buildings
2	EP	Manage Properties and Buildings
3	IG	Fire Risk Mitigation Memorandum Account
4	JH	Real Estate Portfolio and Transaction Management; Project Expenses Related to Optimization Plans
5	JV	Maintain and Operate Applications and Infrastructure

11 a. MWC BI – Maintain Buildings

12 PG&E forecasts Maintain Building costs of \$5.9 million in 2023,
 13 which is an increase from the 2020 Recorded Adjusted costs of
 14 \$0.8 million due primarily to RAMP and investment in facilities where
 15 proposed repair or replacement projects are contained within the Facility
 16 Asset Upkeep program. CRESS investment in its portfolio is not limited
 17 to large projects, but also focused on incremental repair or replacement
 18 of building systems. This incremental effort ensures ongoing
 19 performance to support operations. Not performing this incremental
 20 investment is akin to running building systems to failure, which is not a
 21 prudent operating paradigm for PG&E, particularly in its operations
 22 portfolio which directly provide customer support.

b. MWC EP – Manage Properties and Buildings

PG&E forecasts Manage Properties and Building costs of \$109.5 million in 2023, which is a decrease from the 2020 Recorded Adjusted costs of \$117.1 million due primarily to SFGO/Oakland Lakeside Transition.

c. MWC IG – Fire Risk Mitigation Memorandum Account (FRMMA)

PG&E forecasts Fire Risk Mitigation costs of \$1.1 million in 2023, which is an increase from the 2020 Recorded Adjusted costs of \$0.5 million due primarily to wildfire support.

d. MWC JH – Real Estate Portfolio and Transaction Management; Project Expenses Related to Optimization Plans

PG&E forecasts Portfolio Management costs of \$7.8 million in 2023, which is a decrease from the 2020 Recorded Adjusted costs of \$8.2 million primarily due to the SFGO/Oakland Lakeside Transition.

e. MWC JV – Maintain and Operate Applications and Infrastructure

PG&E forecasts Application and Infrastructure costs of \$16 thousand in 2023, compared to the 2020 Recorded Adjusted cost of \$0, due primarily to software applications.

2. Capital MWCs

Table 5-11 lists the capital MWCs utilized by CRESS.

**TABLE 5-11
REAL ESTATE MWCS
CAPITAL**

Line No.	MWC	Key Initiatives
1	22	Maintain Buildings
2	23	Oakland Lakeside Transition
3	23	SC Investment
4	23	Customer Service Office (CSO) Investment Plan
5	23	Line of Business (LOB) Operational Initiatives
6	2F	Develop and Enhance Applications and Infrastructure

1 **a. MWC 22 – Maintain Buildings**

2 PG&E forecasts Maintain Buildings capital expenditures of
3 \$37.2 million in 2023, which is an increase from the 2020 Recorded
4 Adjusted costs of \$19.6 due primarily to Facility Asset Upkeep Program.

5 **b. MWC 23 – Oakland Lakeside**

6 PG&E forecasts Oakland Lakeside capital expenditures of
7 \$892.0 million in 2023, which is an increase from the 2020 Recorded
8 Adjusted cost of \$0 due to the purchase of Oakland Lakeside.⁴³

9 **c. MWC 23 – SC Investment**

10 PG&E forecast SC Investment capital expenditures of \$43.0 million
11 in 2023, which is a decrease from the 2020 Recorded Adjusted costs of
12 \$88.9 due to renovating, replacing, or and in some cases consolidating,
13 its SCs.

14 **d. MWC 23 – Safety, Security and Compliance**

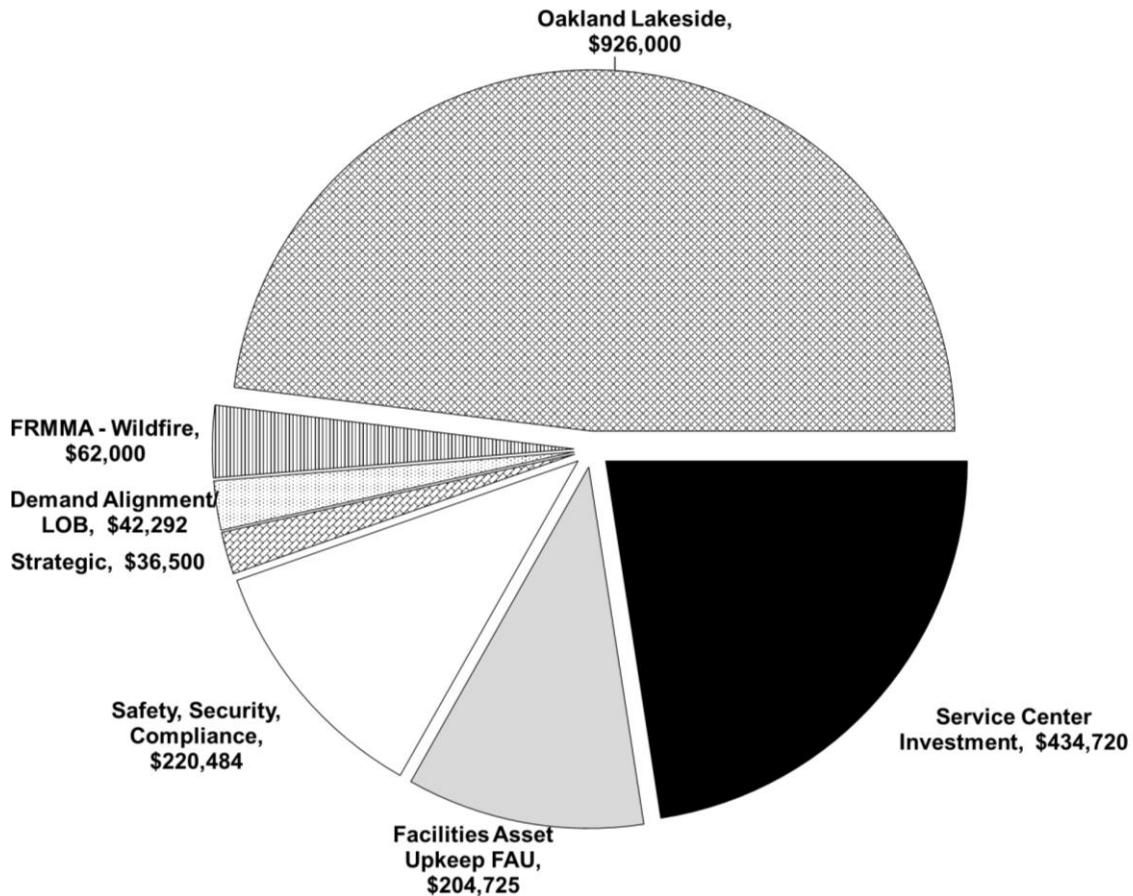
15 PG&E forecast Safety, Security and Compliance capital
16 expenditures of \$47.5 million in 2023, which is an increase from the
17 2020 Recorded Adjusted costs of \$39.5 due primarily to perimeter
18 fencing, material racking, and environmental compliance.

19 **e. MWC 23 – LOB Operational Initiatives**

20 PG&E forecast LOB Operational Initiatives capital expenditures of
21 \$25.0 million in 2023, which is an increase from the 2020 Recorded
22 Adjusted costs of \$10.2 due to the Aviation Operations Center.

⁴³ As described in footnote 9 and Section B.f.1 of this testimony, PG&E's 2023 capital forecast contains the forecasted purchase option amount pending exercising the option. PG&E's capital forecast changes for 2021 thru 2026 will be addressed in the petition for modification, which will be filed within 90 days following the closing date of the Lakeside purchase to reflect the final purchase price. See Exhibit (PG&E-10), Chapter 10, p. 10-10, lines 11 through 14.

FIGURE 5-5
CAPITAL EXPENDITURES – INITIATIVES (2021-2026)
(THOUSANDS OF NOMINAL DOLLARS)



1 D. Estimating Methods

2 1. New Development, Renovations, and Improvements

3 In 2017, PG&E commissioned Leland Saylor Associates (LSA)⁴⁴
 4 an industry leader in cost estimation to develop a cost estimating tool for
 5 CRESS.⁴⁵ The estimating tool uses inputs, such as forecasted number of
 6 personnel, location, seismic performance level, and numbers of floors to
 7 provide total project costs. The tool uses actual cost information from over

⁴⁴ LSA is a certified Disabled Veteran Business Enterprise based in San Francisco and Los Angeles with over 30 years' experience in cost analysis and construction management focusing on education, civic and transit projects, as well as other publicly-funded projects. <https://lelandsaylor.com/> (as of June 16, 2021).

⁴⁵ Exhibit (PG&E-7), WP 5-168, Leland Saylor Associates Estimation.

1 5,000 real estate office projects constructed in California and was updated in
2 April 2018 to reflect current market costs.

3 LSA has developed five models covering common office projects,
4 including two types of office construction, and three types of tenant
5 improvements. Additionally, LSA has developed a model for CSO tenant
6 improvements. Consistent with industry best practices, the cost models use
7 parameter-based cost estimating techniques in which costs are correlated to
8 observed (i.e., historical) data from actual construction projects. The models
9 were developed using industry standard platforms common to the
10 construction industry to facilitate ease of use by the end user and use
11 benchmarked construction cost data sourced from CRESS's project
12 experience, as well as costs provided by the LSA database.

13 For SCs and light industrial sites, PG&E also uses an estimating model
14 that is applied during the early stages of the planning process. The model
15 utilizes cost experience from previous and ongoing PG&E capital projects
16 along with LSA's database to develop a standardized cost estimating model
17 based on common structures (e.g., operations building, warehouse, fleet
18 maintenance, etc.).

19 The model utilizes inputs based on proposed occupancy or use such as:
20 Seated Head Count, Assigned Head Count, Fleet Vehicles, and Employee
21 Vehicles. These numbers are used as programming elements to establish
22 the size of each building type, including: Operations, Fleet Garage,
23 Warehouse/Shop, Wash Bays, Hazmat, and Telecom Buildings.

24 The Programming elements are multiplied by a grossing factor to establish
25 size and overall cost based on each type of building. For rough order of
26 magnitude estimates, PG&E uses an estimated size of respective building
27 and applies a unit rate based on recent contracting experience.

28 The estimates used in the supporting workpapers utilized this method.

29 The model also calculates soft costs (for projects based on historical
30 project data) and allows for an override based on deviation from the typical
31 project delivery model. These factors can be modified to reflect the actual
32 project being contemplated (e.g., a greenfield or development project would
33 require additional design, as compared to a renovation project for the same
34 relative footprint to be added or renovated).

2. Facility Renovations and Repairs

CRESS follows industry standards and best practices in developing cost estimates for maintenance projects. The two primary methods of estimating project costs are planning estimates and competitively bid contract pricing.

a. Planning Estimates

Planning estimates include a description of the project scope, along with cost adjustments based on geographic location, complexity, and intended facility use. These estimates are prepared to develop project budgets, including project management costs, and are based on historical data, current market rates, internal support organization data, and third-party construction experts.

Estimates for project management costs are developed by taking the sum of the construction costs and multiplying them by an industry standard percentage. The industry standard percentage is based upon project scope and complexity, historical data, internal support organization data, third-party construction experts, and widely-accepted industry data sources, such as RS Means,⁴⁶ LSA, Comps Inc.,⁴⁷ and Real Quest.⁴⁸

E. Revenue Forecast

PG&E receives external revenues from certain locations that provide for third-party tenants or outside incremental uses. PG&E expects to exercise its option to purchase the Oakland Lakeside building in 2023 which currently has commercial tenants on the 1st floor. PG&E provided an estimate of potential income from these leases based on current rent role information shared with

⁴⁶ RS Means is a division of Reed Business Information that provides cost information to the construction industry, so that contractors in the industry can provide accurate estimates and projections for their project costs. It has become a data standard for government work in terms of pricing and is widely used by the industry.

⁴⁷ Comps, Inc., is provider of commercial real estate research and information services for property investors and professionals to analyze, interpret, and gain information on and insights into commercial property values, market conditions and supply.

⁴⁸ Real Quest is the largest provider in the United States of real estate, property, ownership, mortgage, and mortgage securities data—and the advanced analytics that use such data.

1 PG&E as part of the purchase due diligence process as part of the SFGO 851
2 sale approval process.

3 PG&E also expects incremental revenue from third-party use of the
4 San Ramon Valley Conference Center. These revenues are not factored into
5 the CRESS forecast, but are addressed in Exhibit (PG&E-10), Chapter 16.

6 **F. Cost Tables**

**TABLE 5-12
EXPENSE
(THOUSANDS OF NOMINAL DOLLARS)**

Line No.	MWC	Description	2016		2017		2018		2019		2020		2021		2022		2023		Reference (A)	
			Recorded	Adjusted	Recorded	Adjusted	Recorded	Adjusted	Recorded	Adjusted	Recorded	Adjusted	Forecast	Forecast	Forecast	Forecast	Forecast	Forecast		
1	BI	Maint Buildings	4,601	7,147	2,687	3,575	767	3,875	5,855	5,855										
2	EP	Manage Property & Bldgs	125,140	114,513	109,531	113,448	117,051	111,900	117,642	109,527										
3	IG	Manage Var Bal Acct Processes				402	545	1,000	1,100	1,100										
4	JH	Implement RealEstate Strategy	11,085	6,093	4,945	1,276	8,153	5,225	6,507	7,787										
5	JV	Maintain IT Apps & Infra	1,294	974	1,255	7		16	16											
6	LL	Charges from Affiliates																		
7		Total	142,120	128,730	118,418	118,708	126,515	122,016	131,120	124,285										
8	ZC	Building Services Overhead Credit	(76,829)	(69,738)	(70,739)	(73,859)	(63,557)	(68,579)	(76,309)	(66,533)										
9		Net Expense	65,291	58,992	47,680	44,848	62,958	53,438	54,811	57,752										

**TABLE 5-13
CAPITAL
(THOUSANDS OF NOMINAL DOLLARS)**

No.	MWC	MWC Description	2016		2017		2018		2019		2020		2021		2022		2023		2024		2025		2026		Reference	
			Recorded	Adjusted	Recorded	Adjusted	Recorded	Adjusted	Recorded	Adjusted	Recorded	Adjusted	Recorded	Adjusted	Forecast	Forecast	Forecast	Forecast	Forecast	Forecast	Forecast	Forecast	Forecast	Forecast		
1	22	Maintain Buildings	48,137	45,103	92,220	55,751	19,593	30,267	37,200	23,558	37,200	41,700	42,000	30,000												
2	23	Implement RealEstate Strategy	90,189	164,456	158,553	106,806	177,880	151,733	152,442	1,007,521	141,300	139,000														
3	2F	Build IT Apps & Infra	0	2																						
4		Grand Total	138,326	209,560	250,774	162,558	197,473	182,000	1,044,721	183,000	181,000	181,000	160,000													