

# Welcome to your CDP Climate Change Questionnaire 2022

## C0. Introduction

### C0.1

#### **(C0.1) Give a general description and introduction to your organization.**

PG&E Corporation is a holding company whose core business is Pacific Gas and Electric Company (PG&E). With approximately 26,000 employees, PG&E is a combined natural gas and electric utility serving more than 16 million Californians. PG&E Corporation had over \$103 billion in assets as of December 31, 2021, and generated revenues of more than \$20 billion in 2021.

As the state's largest energy provider, we embrace our foundational role in transitioning California to a decarbonized and more climate-resilient economy. There are many ways that we can be a force for change, and our size and scale enable PG&E to be a vital part of the solution.

We have a proven performance record on clean energy and, today, one in every five solar rooftops in the country is in PG&E's service area and one in six electric vehicles in the nation plugs into PG&E's grid. We believe clean energy should be affordable for and inclusive of all economic and social backgrounds—and we're excited about the growth opportunities that a cleaner future presents for PG&E and our customers.

As highlighted in our Climate Strategy Report, PG&E is committed to helping to heal the planet by achieving:

- A climate- and nature-positive energy system by 2050.
- A net zero energy system in 2040—five years ahead of California's current carbon neutrality goal.
- A series of 2030 climate goals to reduce PG&E's operational carbon footprint and enable our customers and communities to reduce their carbon footprints:
  - Reduce Scope 1 and 2 emissions by 50% from 2015 levels
  - Reduce Scope 3 emissions by 25% from 2015 levels
  - Achieve "Scope 4" goals to enable customer emission reductions

Highlights from 2021 included:

- Delivered clean electricity to customers that was more than 90% greenhouse-gas-emissions free, with about 50% from state-qualified renewable resources.
- Awarded contracts for more than 3,300 MW of battery energy storage to be deployed through 2024.
- Interconnected more than 600,000 private solar customers, more than any other U.S. utility.
- Installed nearly 5,000 charging ports for electric vehicles, 39% of which are in disadvantaged communities.

- Totaled more than 33,000 customers with installed battery storage, representing more than 360 MW of capacity.
- Helped customers avoid the emission of more than 700,000 metric tons of carbon dioxide through our energy efficiency programs, the equivalent of taking over 150,000 cars off the road for a year.
- Exceeded our Million Ton Challenge one year early, a voluntary goal to avoid one million tons of greenhouse gas emissions from our operations over five years.
- Interconnected our first renewable natural gas project, a first-of-its-kind system bridging dairies and PG&E gas pipelines.

California continues to experience an increase in wildfire risk and a longer wildfire season. Our Wildfire Mitigation Plan includes short-, medium- and long-term plans to reduce wildfire risk and keep our customers and communities safe.

To build climate resilience, PG&E is conducting a multi-year, service area-wide Climate Vulnerability Assessment, using the best available climate projections for California to evaluate climate hazards and risks to PG&E's assets, operations, and services. PG&E expects to file the results of the assessment with the California Public Utilities Commission (CPUC) in 2024.

## C0.2

**(C0.2) State the start and end date of the year for which you are reporting data.**

|                | Start date      | End date          | Indicate if you are providing emissions data for past reporting years |
|----------------|-----------------|-------------------|---|
| Reporting year | January 1, 2021 | December 31, 2021 | No  |

## C0.3

**(C0.3) Select the countries/areas in which you operate.**

United States of America

## C0.4

**(C0.4) Select the currency used for all financial information disclosed throughout your response.**

USD

## C0.5

**(C0.5) Select the option that describes the reporting boundary for which climate-related impacts on your business are being reported. Note that this option should align with your chosen approach for consolidating your GHG inventory.**

Operational control

## C-EU0.7

**(C-EU0.7) Which part of the electric utilities value chain does your organization operate in? Select all that apply.**

Row 1

### Electric utilities value chain

- Electricity generation
- Transmission
- Distribution

### Other divisions

- Gas storage, transmission and distribution
- Smart grids / demand response
- Battery storage
- Micro grids

## C0.8

**(C0.8) Does your organization have an ISIN code or another unique identifier (e.g., Ticker, CUSIP, etc.)?**

| Indicate whether you are able to provide a unique identifier for your organization | Provide your unique identifier |
|--|--------------------------------|
| Yes, a Ticker symbol   | PCG (PG&E Corporation)         |

## C1. Governance

### C1.1

**(C1.1) Is there board-level oversight of climate-related issues within your organization?**

Yes

#### C1.1a

**(C1.1a) Identify the position(s) (do not include any names) of the individual(s) on the board with responsibility for climate-related issues.**

| Position of individual(s) | Please explain  |
|---------------------------|---|
| Board-level committee     | Led by the Committee Chair, the Sustainability and Governance Committee of PG&E Corporation's Board of Directors is comprised of individuals with primary oversight over PG&E's public policy; climate change; and environmental, social, and governance (ESG) policies and practices. This includes the review of climate- |

|                       |   |
|-----------------------|---|
|                       | <p>related policies and programs, PG&amp;E's disclosure on sustainability practices and performance, as well as an annual review of PG&amp;E's sustainability practices and performance. The Committee is composed entirely of independent directors, as defined in the applicable company's guidelines and the Committee's charter.</p> <p>As an example of a climate-related decision within the last two years, the Committee understood the growing risks that climate change poses to Native American tribes and the role that PG&amp;E can play in assisting tribes with decarbonization and climate adaptation. In support of this objective, the Committee decided that PG&amp;E needed to increase its level of engagement with the Native American tribal community by adding a tribal representative to PG&amp;E's external Sustainability Advisory Council to closely advise PG&amp;E on issues related to decarbonization, distributed energy resource deployment, and climate resilience.</p> |
| Board-level committee | The Safety and Nuclear Oversight Committees of the PG&E Corporation and Pacific Gas and Electric Company Boards (Boards) oversee risks arising from operations, including wildfire, employee and public safety, electric, gas and generation operations, other risks associated with facilities, emergency response, and cybersecurity. This includes oversight of risks associated with the impact of climate change on operations, assets and facilities, and planned mitigations.  |

## C1.1b

### (C1.1b) Provide further details on the board's oversight of climate-related issues.

| Frequency with which climate-related issues are a scheduled agenda item | Governance mechanisms into which climate-related issues are integrated   | Please explain  |
|---|--|---|
| Scheduled – some meetings   | <ul style="list-style-type: none"> <li>Reviewing and guiding strategy</li> <li>Reviewing and guiding major plans of action</li> <li>Reviewing and guiding business plans</li> <li>Monitoring implementation and performance of objectives</li> <li>Monitoring and overseeing progress against goals and targets for addressing climate-related issues</li> </ul> | <p>The Sustainability and Governance Committee of PG&amp;E Corporation's Board of Directors has primary oversight over PG&amp;E's public policy, climate change, and ESG policies and practices. This includes an annual review of PG&amp;E's ESG practices and performance and climate risk.</p> <p>The Committee reviews significant climate-related trends, issues, risks, and opportunities that may affect PG&amp;E's operations. It reports to and advises the full Boards regarding business planning and programs. Additionally, this Committee monitors stakeholder engagement and shareholder interest on ESG matters, including ratings and scores, and monitors community engagement matters, including environmental justice and community relations. The Committee also reviews the political contributions</p> |

|                           |   |  |
|---------------------------|---|--|
|                           |   | <p>strategy for alignment with PG&amp;E Corporation’s ESG-related commitments and goals.</p> <p>For example, the Committee oversees climate change-related policy positions that could affect customers, shareholders, or coworkers. Climate-related risks are integrated into “monitoring and overseeing progress against goals and targets for addressing climate-related issues” through regular updates and discussions with the Committee on topics including PG&amp;E’s projects that work towards California’s climate and clean energy goals.</p>  |
| Scheduled – some meetings | <p>Reviewing and guiding strategy</p> <p>Reviewing and guiding major plans of action</p> <p>Reviewing and guiding risk management policies</p> <p>Reviewing and guiding business plans</p> <p>Monitoring implementation and performance of objectives</p> <p>Monitoring and overseeing progress against goals and targets for addressing climate-related issues</p> | <p>The Safety and Nuclear Oversight Committees of the Boards have oversight of the risks associated with the impact of climate change on operations, assets and facilities, and planned mitigations.</p> <p>For example, the Committees track progress against the Utility’s Wildfire Safety Improvement Plan and review with management key risks related to or arising out of the Utility’s operations and facilities. The Committees report in writing to the Boards at least quarterly, and also present orally to the Boards at least quarterly, on PG&amp;E’s progress in meeting the terms of the approved Wildfire Safety Improvement Plan and, to the extent there are shortfalls, how the Utility will address the shortfalls.</p> |

## C1.1d

**(C1.1d) Does your organization have at least one board member with competence on climate-related issues?**

|       | Board member(s) have competence on climate-related issues | Criteria used to assess competence of board member(s) on climate-related issues   |
|-------|---|---|
| Row 1 | Yes   | PG&E uses use a matrix of skills for Board members that was developed with input from regulators and other stakeholders. The matrix emphasizes—amongst several skills—specific experience in utility management, natural gas systems, nuclear generation, emergency management, wildfire management, climate change |

|  |   |
|--|---|
|  | <p>mitigation or climate resilience, renewable energy and related engineering experience, innovation and technology in the clean energy or utility industry, and financial literacy.</p> <p>Each Board member is evaluated against the matrix as part of the refreshment process, which is overseen by the Sustainability and Governance Committee each year. The process includes an annual review of independence, an assessment of skills and qualifications, and an evaluation of the director’s commitment to serving on the Boards.</p> |
|--|---|

## C1.2

**(C1.2) Provide the highest management-level position(s) or committee(s) with responsibility for climate-related issues.**

| Name of the position(s) and/or committee(s)   | Responsibility  | Frequency of reporting to the board on climate-related issues |
|---|---|---|
| Chief Executive Officer (CEO)   | Both assessing and managing climate-related risks and opportunities | More frequently than quarterly                                |
| Other, please specify<br>Executive Vice President of Corporate Affairs and Chief Sustainability Officer | Both assessing and managing climate-related risks and opportunities | More frequently than quarterly                                |
| Sustainability committee  | Both assessing and managing climate-related risks and opportunities | Quarterly   |
| Other committee, please specify<br>Executive Vice President of Engineering, Planning, and Strategy      | Both assessing and managing climate-related risks and opportunities | More frequently than quarterly                                |

## C1.2a

**(C1.2a) Describe where in the organizational structure this/these position(s) and/or committees lie, what their associated responsibilities are, and how climate-related issues are monitored (do not include the names of individuals).**

Given the strategic nature of climate change to our business, PG&E Corporation’s CEO has the overall responsibility for climate change-related issues. The CEO, who reports to the PG&E Corporation Board of Directors, actively monitors climate-related issues through regular engagement and communication with senior staff and supporting PG&E team members. The CEO’s role includes managing risks and opportunities associated with greenhouse gas emissions reductions as well as adapting the company’s systems, operations, and planning to a changing climate and changing weather patterns.

PG&E Corporation's Executive Vice President of Corporate Affairs and Chief Sustainability Officer reports directly to the CEO and is responsible for developing and implementing strategies for all aspects of corporate affairs, including climate change-related regulatory, government relations, public policy, and charitable giving. This includes supporting the implementation of PG&E's business objectives through federal, state, and local climate-related public policy advocacy; developing and implementing regulatory and legislative strategy; and strategic engagement with external stakeholders.

Through day-to-day oversight responsibilities, this individual monitors climate-related issues while also co-chairing PG&E's Sustainability Leadership Council (Council), a cross-departmental committee focused on reducing the greenhouse gas footprint of PG&E's operations. Co-chaired with PG&E's Vice President of Business Development and Customer Engagement, the Council brings together leaders from functions such as gas and electric operations, supply chain management, corporate real estate, transportation services, environmental compliance, and customer energy solutions.

Pacific Gas and Electric Company's Executive Vice President of Engineering, Planning, and Strategy is responsible for PG&E's near-term engineering priorities and long-term planning, including oversight of the utility's gas system and electric infrastructure. This work includes oversight of PG&E's climate resilience objectives and work to ensure the continued safe, reliable, and affordable operation of PG&E's system in the face of a changing climate.

### C1.3

**(C1.3) Do you provide incentives for the management of climate-related issues, including the attainment of targets?**

|       | Provide incentives for the management of climate-related issues | Comment |
|-------|---|---------|
| Row 1 | Yes   |         |

### C1.3a

**(C1.3a) Provide further details on the incentives provided for the management of climate-related issues (do not include the names of individuals).**

| Entitled to incentive              | Type of incentive | Activity incentivized      | Comment   |
|------------------------------------|-------------------|----------------------------|---|
| Chief Sustainability Officer (CSO) | Monetary reward   | Emissions reduction target | Employees at all levels, including our Chief Sustainability Officer, are eligible for merit increases based on progress towards the company's goals that relate to climate change, such as setting and achieving greenhouse gas emission reduction targets and employees' success in advancing climate change policy in line with PG&E's policy goals. Employee monetary rewards are based on performance against individual and/or departmental operating plans. |

|               |                     |   |   |
|---------------|---------------------|---|---|
| All employees | Non-monetary reward | Behavior change related indicator                 | <p>All employees may receive non-monetary recognition based on their management of climate change issues. For example, PG&amp;E's Richard A. Clarke Award honors an individual or a team who have demonstrated environmental leadership. The winners have the opportunity to donate a \$3,500 charitable contribution to an eligible 501(c)3 non-profit organization of their choice.</p> <p>The most recent Clarke Award winner was a climate change project, where a team of PG&amp;E co-workers developed a new model for how PG&amp;E can build climate resilience for our operations and communities. The cross-functional team of co-workers joined with Menlo Park and local and regional groups to earn a grant from FEMA for a nature-based levee to protect the community and infrastructure, including a PG&amp;E substation, from sea level rise.</p> <p>PG&amp;E's Community Service Incentive Program provides workers and retirees who volunteer more than 25 personal service hours with a grant of \$350 on their behalf to an eligible 501(c)3 non-profit organization of their choice, including groups working to address climate change.</p> |
| All employees | Monetary reward     | Other (please specify)<br>Wildfire risk reduction | The variable compensation of all employees is impacted by PG&E's annual targets to reduce wildfire risk, among other measures.  |

## C2. Risks and opportunities

### C2.1

**(C2.1) Does your organization have a process for identifying, assessing, and responding to climate-related risks and opportunities?**

Yes

#### C2.1a

**(C2.1a) How does your organization define short-, medium- and long-term time horizons?**

|  | From (years) | To (years) | Comment |
|--|--------------|------------|---------|
|--|--------------|------------|---------|

|             |   |    |   |
|-------------|---|----|---|
| Short-term  | 0 | 1  | PG&E's short-term time horizon is 2022.   |
| Medium-term | 1 | 8  | PG&E's goals are to reduce our Scope 1 and 2 emissions by 50% and our Scope 3 emissions by 25% by 2030, compared to 2015 levels. PG&E also has various "Scope 4" goals to enable customer emission reductions by 2030.  |
| Long-term   | 8 | 28 | PG&E's long-term horizon spans onward after 2030 toward 2050. PG&E is committed to helping to heal the planet by achieving a net zero energy system in 2040—five years ahead of California's current carbon neutrality goal—and a climate- and nature-positive energy system by 2050. |

## C2.1b

### (C2.1b) How does your organization define substantive financial or strategic impact on your business?

Climate risks for PG&E are defined as those that have a strategic impact on PG&E's business of providing safe, reliable, affordable, and clean energy to our customers and impact the long-term sustainability of PG&E as an enterprise. As a provider of critical infrastructure and energy services, PG&E faces a variety of risks from a changing climate, including heat waves, more frequent and extreme storms, drought, subsidence, wildfires, wind events, and rising sea levels. Building greater climate resilience involves understanding the impacts of climate change on our business and being prepared to withstand and rapidly recover from major disruptions to service caused by changing climate conditions and weather events.

Severe weather events and other natural disasters could result in severe business disruptions, prolonged power outages, property damage, injuries or loss of life, significant decreases in revenues and earnings, and/or significant additional costs to PG&E. Any such event could have a material effect on PG&E's financial condition, results of operations, liquidity, and cash flows. Any of such events also could lead to significant claims against PG&E. Further, these events could result in regulatory penalties and disallowances, particularly if PG&E encounters difficulties in restoring power to its customers on a timely basis or if the related losses are found to be the result of PG&E's practices and/or the failure of PG&E's electric and other equipment.

Under a court-developed materiality standard, information is material if there is a substantial likelihood that a reasonable investor would consider it important. We do not view climate change as a single risk on its own, but rather a cross-cutting factor to existing risk and opportunity considerations that we manage in our planning. We also recognize that climate change may affect different parts of our business in different ways.

## C2.2

### (C2.2) Describe your process(es) for identifying, assessing and responding to climate-related risks and opportunities.

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**Value chain stage(s) covered**

Direct operations

**Risk management process**

Integrated into multi-disciplinary company-wide risk management process

**Frequency of assessment**

More than once a year

**Time horizon(s) covered**

Short-term

Medium-term

Long-term

**Description of process**

Risk Management Program Implementation:

At PG&E, climate-related risk management is integrated into our multi-disciplinary company-wide risk management process, which is facilitated by a central group, implemented by each functional group, and overseen by senior management and the Boards. This process encompasses risks to our direct operations and includes short-, medium-, and long-term risks. Functional groups manage climate-related opportunities through the strategic business planning process, including for customer energy solutions and transportation electrification.

The full Boards' oversight of risk management programs ensures that programs are designed and implemented by management appropriately, and are functioning as intended.

Oversight begins with the Audit Committees, which review the full spectrum of key enterprise risks on an annual basis. The Audit Committees allocate responsibility for an in-depth review of each enterprise risk to various Board committees, based on the scope of each Committee's charter. The specific allocation of Board-level risk oversight was most recently reviewed by the Audit Committees in December 2021. Management provides regular reports to the Committees on the effectiveness of risk mitigations for each risk, including looking ahead and planning for future conditions over the medium and long-term. Each committee provides a report of its activities to the Boards.

Within management, the Executive Vice President and Chief Risk Officer (CRO) of PG&E Corporation and PG&E oversees the Enterprise and Operational Risk Management (EORM) program; the CRO reports directly to the PG&E Corporation CEO. Senior management categorizes enterprise risks and recommends the most serious risks for Board-level review at least once every 12 months. The EORM program, including enterprise risks, is overseen by senior management and the Boards of Directors.

With guidance from a central program office, PG&E maintains a risk register of event-based and cross-cutting risks. We follow a consistent enterprise-wide approach to identify, evaluate, respond to, and monitor risks. With our evaluation methodology, PG&E calculates a baseline risk score and evaluates different mitigation strategies on their ability to reduce this score. This evaluation methodology prioritizes the highest safety risks while also accounting for energy system reliability and financial risk.

The risk of PG&E assets or activities initiating a catastrophic wildfire is the risk with the highest baseline risk score. PG&E's annual Wildfire Mitigation Plan and our Public Safety Power Shutoff (PSPS), Enhanced Powerline Safety Settings (EPSS), and undergrounding programs are intended to reduce the risk of wildfires to infrastructure, property, communities, and the environment.

We track risk mitigations throughout the year, and refresh risk assessments periodically to capture the impact of mitigation strategies and to reflect changes to the operating environment. This risk management program provides risk reduction transparency and accountability. Risk and compliance committees, which include senior leaders, are an important element of PG&E's risk management program and provide leadership, strategic guidance, and oversight for each functional group.

#### Climate Adaptation and Resilience:

On an ongoing basis, PG&E assesses the potential physical risks of climate change to our system. PG&E's cross functional climate resilience team is headed by the Executive Vice President of Engineering, Planning, and Strategy and coordinates work across enterprise risk management; internal culture, integration, and planning; and external engagement.

PG&E maintains emergency response plans and procedures to address a range of near-term risks and uses our risk assessment process to prioritize infrastructure investments for longer-term risks associated with climate change.

#### Assessment:

We proactively track and evaluate climate-related risks. In 2020, PG&E launched a multi-year Climate Vulnerability Assessment, the results of which are designed to help PG&E target investments to infrastructure that is most vulnerable to climate impacts and that could significantly impact customers in the event of service disruption.

As part of this effort, in 2021, PG&E's climate resilience team began a multi-year effort to engage on the technical analysis of the assessment with disadvantaged and vulnerable communities region by region. PG&E will continue this process as we work towards a submittal to the CPUC by 2024.

As part of this assessment, PG&E is reviewing our critical operations and services to understand how future climate conditions may impact PG&E's ability to deliver energy to customers. This will also include an assessment of critical non-energy assets and is

designed to cover the level of risk, adaptive capacity, and hazards to physical assets and employee health and safety.

## C2.2a

### (C2.2a) Which risk types are considered in your organization's climate-related risk assessments?

|                    | Relevance & inclusion     | Please explain  |
|--------------------|---------------------------|---|
| Current regulation | Relevant, always included | <p>PG&amp;E is and will be subject to regulation regarding climate change. Failure to comply with these regulations could result in enforcement actions and accordingly, to fines, penalties, customer rebates, or other payments.</p> <p>PG&amp;E is committed to helping to heal the planet by achieving a net zero energy system in 2040—five years ahead of California’s current carbon neutrality goal—and a climate- and nature-positive energy system by 2050.</p> <p>PG&amp;E is also committed to California’s vision of a sustainable energy future. This commitment includes our support for the state’s implementation of SB 100 and carbon neutrality by 2045 in a reliable and cost-effective manner for our customers.</p> <p>Among many areas of focus, the California Air Resources Board’s (CARB) Scoping Plan includes various methods of reducing GHG emissions from natural gas. These regulations include more aggressive energy efficiency programs to reduce natural gas end use and increased RPS, which reduces non-core customer gas demand. Non-compliance with these regulations could include RPS-related financial penalties, loss of financial incentives, and reputational risks.</p> <p>As part of the Scoping Plan Update, CARB Staff built four carbon neutral scenarios (two by 2035, two by 2045), where remaining emissions are balanced by carbon removal. CARB staff proposed to select a scenario that achieves state-wide carbon neutrality by 2045 because it is more feasible than the 2035 scenarios, provides significant health benefits, and has the lowest economic and employment impacts. The agency requested stakeholder feedback on its analysis.</p> <p>PG&amp;E is actively participating in CARB’s process to update the plan for how the state will achieve its short- and long-term greenhouse gas emission reduction targets, including providing feedback on the draft Scoping Plan Update.</p> |

|                            |                                  |  |
|----------------------------|----------------------------------|--|
|                            |                                  | <p>PG&amp;E is also participating in a California Energy Commission (CEC)-led Gas Working Group with statewide stakeholders and a CEC-funded project to identify strategic pathways for tactical decommissioning of portions of gas infrastructure in our service area.</p> <p>The designated Risk and Compliance Committees within PG&amp;E's lines of business integrate these considerations into PG&amp;E's risk management process through regular tracking and discussion to help ensure that activities are adequate and effective, and that resources are available as needed.</p>   |
| <p>Emerging regulation</p> | <p>Relevant, always included</p> | <p>PG&amp;E is and will be subject to regulation regarding climate change. Failure to comply with these regulations could result in enforcement actions and accordingly, to fines, penalties, customer rebates, or other payments</p> <p>PG&amp;E routinely analyzes how potential and emerging regulations, particularly energy and environmental regulations at the state or federal levels, might impact our business, recognizing that California's environmental laws and regulations typically exceed federal standards. This includes assessing factors such as the extent to which they represent timely, durable, environmentally effective, and affordable policy and energy solutions.</p> <p>In 2021, the National Highway Traffic Safety Administration released a proposed rule that would repeal the Trump Administration's rollback of the Corporate Average Fuel Economy (i.e., motor vehicle fuel economy standards) and GHG standards for light-duty vehicles starting with model year 2021. The proposed rule does not reconsider the revocation of California's waiver but this could occur in a separate, independent EPA proceeding in the future.</p> <p>Uncertainty surrounding fuel and GHG standards and the future of California's ZEV waiver could slow uptake of EVs in the state, leading to underutilization of PG&amp;E's EV charging network and impact revenue associated with electricity sales.</p> <p>The designated Risk and Compliance Committees within PG&amp;E's lines of business integrate these considerations into PG&amp;E's risk management process through regular tracking and discussion to help ensure that activities are adequate and effective, and that resources are available as needed. Central to our overall approach is engaging at the federal, state, and international levels through a variety of coalitions.</p> |

|            |                              |   |
|------------|------------------------------|---|
| Technology | Relevant, always included    | <p>Technological advancements are occurring rapidly in the energy industry. PG&amp;E routinely monitors technological advancements, and how these advancements might impact business outcomes, such as increased self-generation by customers, increases in distributed energy resources, advances in energy efficiency and improvements in battery technologies, among others. Failure to fully understand, anticipate, and incorporate technological advancements into PG&amp;E's risk assessment might result in lost opportunities for engaging with market participants and customers in new business areas.</p> <p>As an example, PG&amp;E aims to maintain a sulfur hexafluoride (SF6) leak rate of below 1% annually and is exploring SF6-free electrical equipment. To do so, we are dependent on the emerging SF6-free alternative technologies available in the market for gas-insulated switchgear and gas-insulated dead tank circuit breakers. We are testing new technologies and solutions, and collaborating with other like-minded utilities and vendors. However, integrating SF6-free technology will take time, and the effective performance of new technology is essential to meeting our goal and maintaining safe and reliable service.</p> <p>The designated Risk and Compliance Committees within PG&amp;E's lines of business integrate these considerations into PG&amp;E's risk management process through regular tracking and discussion to help ensure that activities are adequate and effective, and that resources are available as needed.</p> |
| Legal      | Relevant, sometimes included | <p>The key climate-related legal risks to PG&amp;E arise from wildfire risk, although there are other climate-related legal risks.</p> <p>Climate change exacerbates both the probability and magnitude of wildfires. PG&amp;E Corporation and PG&amp;E have determined that it is probable they will incur losses in connection with the 2019 Kincadee fire, the 2020 Zogg fire, and the 2021 Dixie fire and are subject to civil complaints in connection with those fires. PG&amp;E Corporation and PG&amp;E are also subject to investigations, regulatory proceedings, and other enforcement actions, including criminal charges, in connection with wildfires. PG&amp;E Corporation and PG&amp;E expect that they would face similar legal challenges in the event of future catastrophic wildfires. While PG&amp;E's insurance and the Wildfire Fund under AB 1054 mitigate this risk, they do not eliminate it.</p> <p>California law also includes a doctrine of inverse condemnation that is routinely invoked in the state. If PG&amp;E's facilities, such as its electric distribution and transmission lines, are determined to be the substantial cause of fires, and inverse condemnation applies, PG&amp;E</p>  |

|        |                           |   |
|--------|---------------------------|---|
|        |                           | <p>could be liable for property damage, business interruption, interest, and attorneys' fees without having been found negligent.</p> <p>PG&amp;E Corporation and PG&amp;E are subject to the Enhanced Oversight and Enforcement Process (EOEP). The EOEP is a six-step process with potentially escalating CPUC oversight and enforcement measures based on specific "triggering events" identified for each of the six steps, many of which are related to wildfires. If PG&amp;E is placed into the EOEP, it will be subject to additional reporting requirements and additional monitoring and oversight by the CPUC. Higher steps of the process (steps 3 through 6) also contemplate additional enforcement mechanisms, including appointment of an independent third-party monitor, appointment of a chief restructuring officer, pursuit of the receivership remedy, and review of PG&amp;E's license to operate as a utility.</p> <p>Further, the U.S. Securities and Exchange Commission (SEC) recently proposed rule changes that would require disclosure of climate-related information. As noted in the comment letter that PG&amp;E sent to the SEC, it is not clear that it would be possible to comply with all of the proposed disclosure requirements. If adopted, these additional disclosure requirements could increase PG&amp;E Corporation and PG&amp;E's exposure to shareholder lawsuits and SEC enforcement actions.</p> |
| Market | Relevant, always included | <p>The electric power industry is undergoing transformative change driven by technological advancements enabling customer choice and state climate policy supporting a decarbonized economy.</p> <p>California utilities also are experiencing increasing deployment by customers and third parties of distributed energy resources, such as on-site solar generation, energy storage, fuel cells, energy efficiency, and demand response technologies. These developments will require modernization of the electric distribution grid to, among other things, accommodate two-way flows of electricity, increase the grid's capacity, and interconnect distributed energy resources.</p> <p>To enable California's clean energy economy, sustained investments are required in grid modernization, renewable integration projects, energy efficiency programs, energy storage adoption, EV infrastructure, and state infrastructure modernization (e.g., rail and water projects). If PG&amp;E is unable to effectively adapt to these changes, its business model and its ability to execute on its strategy could be materially impacted.</p> <p>Additionally, various jurisdictions within California have enacted</p>   |

|                   |                                     |   |
|-------------------|-------------------------------------|---|
|                   |                                     | <p>prohibitions or restrictions on the use and consumption of natural gas in buildings, which will reduce the use of natural gas. Reducing natural gas use could lead to a reduction in the gas customer base and a diminished need for gas infrastructure and, as a result, could lead to certain gas assets no longer being “used and useful,” potentially causing substantial investment value of gas assets to be stranded. Under CPUC precedent, when an asset no longer meets the standard of “used and useful,” the asset is removed from rate base, which results in a reduction in associated rate recovery.</p> <p>However, while natural gas demand is projected to decline over time, the costs of operating a safe and reliable gas delivery system in California have been increasing, among other things, to cover the cost of long-term pipeline safety enhancements. Inability by PG&amp;E to recover through rates its investments into the natural gas system while still ensuring gas system safety and reliability could materially affect PG&amp;E’s financial condition, results of operations, liquidity, and cash flows.</p>   |
| <p>Reputation</p> | <p>Relevant, sometimes included</p> | <p>PG&amp;E faces reputational risks associated with how our customers perceive our policies, actions, and plans to address climate change.</p> <p>PG&amp;E monitors these perceptions and manages reputational risk by complying with relevant laws and regulations and seeking opportunities to go beyond compliance, sharing our plans and progress in a transparent manner (including our new, longer-term climate goals), and proactively engaging with stakeholders to stay abreast of climate change issues facing PG&amp;E and our customers, including increasing wildfire risk, and being a constructive voice in developing solutions.</p> <p>For example California continues to experience an increase in wildfire risk and a longer wildfire season. We may need to turn off power during severe weather to help prevent wildfires. We know that losing power disrupts lives, and we are providing customers with more resources before, during, and after PSPS and EPSS events.</p> <p>We measure a composite score of customer satisfaction and are committed to improving satisfaction, which we benchmark against our peers. In 2019, due to PG&amp;E’s Chapter 11 filing and multiple PSPS events, customer satisfaction with PG&amp;E decreased from the prior year, and in 2020 and 2021 the score remained consistent.</p> <p>The designated Risk and Compliance Committees within PG&amp;E integrate these considerations into PG&amp;E’s risk management process through regular tracking and discussion to help ensure that activities</p> |

|                       |                                  |   |
|-----------------------|----------------------------------|---|
|                       |                                  | <p>are adequate and effective, and that resources are available as needed.</p>  |
| <p>Acute physical</p> | <p>Relevant, always included</p> | <p>Extreme weather, drought, and shifting climate patterns have intensified the challenges associated with many of the other risks facing PG&amp;E, particularly wildfire management in California.</p> <p>Wildfires threaten the safety of customers as well as PG&amp;E assets such as electric transmission and distribution lines, gas infrastructure, and hydroelectric assets -- also creating the need for emergency response from PG&amp;E crews. Wildfires also increase the risk of customer outages and increased risk of erosion and landslides in affected areas, putting communities and infrastructure assets at risk.</p> <p>PG&amp;E's service area encompasses some of the most densely forested areas in California and, as a consequence, is subject to high risk from vegetation-related ignition events. Further, environmental extremes, such as drought conditions and extreme heat followed by periods of wet weather, can drive additional vegetation growth (which can then fuel fires) and influence both the likelihood and severity of extraordinary wildfire events.</p> <p>In particular, the risk posed by wildfires has increased in PG&amp;E's service area as a result of an ongoing extended period of drought, bark beetle infestations in the California forest, and wildfire fuel increases due to rising temperatures and record rainfall following the drought, and strong wind events, among other environmental factors.</p> <p>Today, more than half of our service area is in a High Fire Threat District (HFTD), as designated by the CPUC. PG&amp;E is approaching this issue with urgency to prevent our facilities from creating public safety risks.</p> <p>PG&amp;E's 2022 Wildfire Mitigation Plan outlines PG&amp;E's broad program to reduce wildfires, with many complementary initiatives that work together to boldly address California's evolving wildfire risk and describes PG&amp;E's comprehensive and multi-faceted wildfire safety strategy, utilizing programs and actions that have proven effective at reducing wildfire risk and expanding innovative programs and actions initiated in prior years.</p> <p>PG&amp;E's Wildfire Risk Governance Steering Committee reviews and approves the workplans for the most critical wildfire risk mitigation programs to ensure they are in alignment with PG&amp;E's risk model and monitors regular reporting of work completed and quality of results.</p> |

|                         |                                  |  |
|-------------------------|----------------------------------|--|
| <p>Chronic physical</p> | <p>Relevant, always included</p> | <p>PG&amp;E’s infrastructure spans more than 70,000 square miles and faces a variety of risks driven by the changing climate, including heat waves, more frequent and extreme storms and wildfires, drought, subsidence, and rising sea levels.</p> <p>For example, PG&amp;E faces the risk of higher inundation and flooding potential at coastal and low elevation facilities and assets due to high tides, storm runoff, and storm surges—risks that will be exacerbated by sea level rise. The risk of groundwater intrusion or increased underground buoyant forces may also increase due to sea level rise, which may impact underground facilities or equipment putting assets at risk. PG&amp;E also faces the risk of damage to substations and other gas and electric infrastructure. These costs could be substantial; completely moving and rebuilding a substation is estimated to cost at least \$100 million.</p> <p>PG&amp;E’s multipronged approach includes: (1) Integrating climate science into key business functions and creating tools to support planning and decision-making that takes into account the future climate; for example, we are leveraging data from Cal-Adapt, the state’s portal for climate projection data, as we strive to ensure that investments in our system will be adequate in light of more extreme weather expected in the future; (2) Engaging with utility peers and policymakers to advance energy sector climate resilience, stay up to date on the most recent developments in the field, and help state and federal officials in their efforts to prepare for climate change; and (3) Partnering directly with customers and communities to enhance climate resilience in California. For example, PG&amp;E has offered grants to help communities through our Better Together Resilient Communities program.</p> <p>PG&amp;E’s climate resilience team coordinates work across enterprise risk management; internal culture, integration, and planning; and external engagement. PG&amp;E also maintains emergency response plans and procedures to address a range of near-term risks and uses its risk-assessment process to prioritize infrastructure investments for longer-term risks associated with climate change.</p> |
|-------------------------|----------------------------------|--|

### C2.3

**(C2.3) Have you identified any inherent climate-related risks with the potential to have a substantive financial or strategic impact on your business?**

Yes

## C2.3a

**(C2.3a) Provide details of risks identified with the potential to have a substantive financial or strategic impact on your business.**

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### Identifier

Risk 1

### Where in the value chain does the risk driver occur?

Direct operations

### Risk type & Primary climate-related risk driver

Current regulation

Mandates on and regulation of existing products and services

### Primary potential financial impact

Increased indirect (operating) costs

### Company-specific description

In 2021, about 50% of our supplied electricity came from renewable resources—along with 39% from nuclear, 4% from large hydro, and 9% from natural gas-fired generation. SB 100 increases the state's previous Renewable Portfolio Standard (RPS) requirements to 60% by 2030 and 100% of retail sales from eligible renewables and zero-carbon resources by 2045. All of California's load serving entities, including PG&E, are required to meet the RPS requirement. PG&E set a voluntary goal to deliver 70% of our electricity from eligible renewable resources by 2030.

To comply with California's RPS requirements, PG&E must deliver renewable energy to its customers at a gradually increasing rate. PG&E faces the regulatory risk of non-compliance, which invokes financial penalties. There is also a risk of increased procurement and integration costs. PG&E could be at risk of non-compliance should contracted renewable energy supply projects underdeliver, there are delays in permitting and construction of new renewable energy supply projects, and/or delays in permitting and construction of transmission infrastructure to deliver renewable energy to PG&E.

### Time horizon

Short-term

### Likelihood

Very unlikely

### Magnitude of impact

Medium-high

### Are you able to provide a potential financial impact figure?

Yes, an estimated range

**Potential financial impact figure (currency)**

**Potential financial impact figure – minimum (currency)**

1

**Potential financial impact figure – maximum (currency)**

25,000,000

**Explanation of financial impact figure**

PG&E's cost of compliance risk for not meeting California's RPS is \$50 per MWh, up to \$25 million per year. This figure is determined by the CPUC and was codified in CPUC Decision: D.14-12-023; D.18-05-026. The minimum potential financial impact figure assumes PG&E meets the compliance requirements with no violations in the reporting year.

In its decision confirming these financial impact figures, the CPUC stated, "Lower (differential) penalties for not meeting the long-term procurement goals would undermine the core mandate of the RPS program ... [and] lowering the current penalty amount will undermine compliance by creating an economic disincentive to comply, as it may be cheaper to pay a penalty for noncompliance than comply with the procurement requirement. The RPS enforcement rules have always been structured to incentivize compliance rather than present options for Alternative Compliance Mechanisms or any other similar opportunities."

**Cost of response to risk**

2,620,000,000

**Description of response and explanation of cost calculation**

PG&E's renewable energy portfolio costs in 2021 were approximately \$2.6 billion, as detailed on pg. 12 of the CPUC's 2022 Padilla Report available at <https://www.cpuc.ca.gov/-/media/cpuc-website/divisions/office-of-governmental-affairs-division/reports/2022/2022-padilla-report.pdf>.

Renewable energy costs include costs for PG&E's RPS-eligible portfolio, which consists of about 260 contracts for more than 6,500 MW of contracted capacity. PG&E's power purchase agreements primarily consist of generation plants leased to meet customer demand plus applicable reserve margins and payments are based on certain contingent external factors such as wind, hydro, solar, biogas, and biomass power generation.

**Case Study:**

PG&E is required to comply with California's RPS requirement to supply customers with 60% RPS-eligible electricity by the end of 2030 and 100% of retail sales from eligible renewables or zero-carbon resources by the end of 2045. PG&E recently set a voluntary goal to achieve 70% RPS clean electricity by 2030. PG&E utilizes a variety of approaches to achieve California's renewable energy goals, including leveraging competitive solicitations to procure renewable energy from third parties and owning renewables projects ourselves.

While the majority of PG&E's renewable resources come from contracts with third-party renewable energy companies, PG&E has 49 utility-owned RPS-eligible generation facilities representing 430+ MW of additional capacity. We work with regulators, environmental organizations, and others to ensure we continue to manage our portfolio responsibly and in a way that is affordable for customers.

PG&E develops an Integrated Resource Plan to ensure that future energy portfolios meet California's clean energy goals in a reliable and cost-effective manner. PG&E aligns its procurement strategy with near, medium, and longer-term RPS obligations. PG&E has direct contact with renewable project developers and closely monitors the CAISO interconnection queue.

In 2021, about 50% of our customers' electricity came from specified eligible-renewable resources—including biopower, geothermal, small hydroelectric, solar, and wind power—and more than 90% came from greenhouse gas-free resources.

Beyond RPS, PG&E has also connected more than 600,000 customers with rooftop solar to the grid, and supports customers with resources before, during, and after they go solar. About one in every five solar rooftops in the country is in PG&E's service area.

## Comment

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### Identifier

Risk 2

### Where in the value chain does the risk driver occur?

Direct operations

### Risk type & Primary climate-related risk driver

Current regulation

Mandates on and regulation of existing products and services

### Primary potential financial impact

Increased indirect (operating) costs

### Company-specific description

Uncertainty around state and federal GHG regulations may result in increased costs to PG&E customers, such as compliance costs for new business processes, equipment, training, and oversight. For example, at the state level, the California Air Resources Board's (CARB) Short-lived Climate Pollutant Strategy includes policies that affect PG&E and our service area, including minimizing pipeline emissions (leaks and venting) and increasing renewable natural gas, among others.

The CARB's Oil and Natural Gas Regulation impacts PG&E compressor stations and

natural gas storage facilities such as McDonald Island. The CPUC's Gas Leak Abatement rulemaking resulting from SB 1371 minimizes natural gas leaks and advances GHG reduction goals. At the federal level, the Protecting our Infrastructure of Pipelines and Enhancing Safety Act of 2020 added requirements for gas operators to minimize methane emissions that may add to CARB's and the CPUC's regulations.

**Time horizon**

Short-term

**Likelihood**

Likely

**Magnitude of impact**

Medium-low

**Are you able to provide a potential financial impact figure?**

Yes, an estimated range

**Potential financial impact figure (currency)**

**Potential financial impact figure – minimum (currency)**

1

**Potential financial impact figure – maximum (currency)**

3,650,000

**Explanation of financial impact figure**

The potential financial impact figure relates to the financial implications of non-compliance with CARB's Oil and Gas Regulation. If requirements are not met within a certain time frame, there is a \$10,000 per day per violation. The minimum potential financial impact figure assumes PG&E meets the compliance requirements with no violations in the reporting year. The maximum potential impact figure provided would be the worst-case scenario of PG&E not meeting this compliance obligation for a full year. In addition, the CPUC adopted restrictions on rate recovery beginning in 2025 for methane emissions greater than 20% below the 2015 baseline.

**Cost of response to risk**

75,000,000

**Description of response and explanation of cost calculation**

For the CPUC's Gas Leak Abatement rulemaking, PG&E's most recent Compliance Plan is estimated to cost approximately \$75 million. Management costs include the implementation of best management practices such as applying methane abatement strategies to reduce project blowdowns; accelerated leak survey cycles; a special leak survey; meter set leak prioritization; and super-emitter surveys and leak repairs.

**Case Study:**

In 2015, the CPUC issued a rulemaking to implement SB 1371, which requires rules and

procedures to minimize natural gas leakage from CPUC-regulated natural gas pipeline facilities. Both the CARB's Oil and Gas Regulation and the CPUC's Gas Leak Abatement rulemaking require that PG&E conduct methane leak survey and repairs throughout PG&E's natural gas transmission and distribution operations. This requires investment in both mobile and stationary leak survey technologies, as well as R&D into new technologies.

In response, PG&E's Natural Gas Leak Abatement Program includes annual methane emissions tracking and reporting as well as the submission of a biennial best practice compliance plan, which is prepared in accordance with the CPUC's decision. The plan details activities taken to reduce emissions. For example, PG&E has made several programmatic changes to its leak and emission management practices to reduce methane emissions:

- PG&E's gas distribution organization moved to a three-year leak survey cycle on January 1, 2018.
- PG&E has continued to make improvements to our distribution leak management practices with the Super Emitter leak abatement program.
- PG&E implemented an approach to identify larger leaks (greater than or equal to 10 standard cubic feet per hour), by conducting annual surveys to target these larger emissions.

Focusing repairs on large leaks in a gas distribution system has the potential to be an effective way to reduce methane emissions because their contribution is disproportionately large: a 2014 WSU study found that 56% of methane emissions were due to only 2% of leaks.

As a result of the Super Emitter program, up to 2021, PG&E identified and repaired over 700 super emitter leaks, saving 0.67 billion cubic feet (BCF) of natural gas.

## Comment

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### Identifier

Risk 3

### Where in the value chain does the risk driver occur?

Direct operations

### Risk type & Primary climate-related risk driver

Acute physical

Wildfire

### Primary potential financial impact

Increased direct costs

### Company-specific description

PG&E is experiencing increased wildfire frequency and intensity in our service area. Wildfires threaten the safety of customers as well as PG&E assets such as electric transmission and distribution lines, gas infrastructure, and hydroelectric assets -- also creating the need for emergency response from PG&E crews. Wildfires also increase the risks of customer outages and of erosion and landslides in affected areas, putting communities and infrastructure assets at risk.

PG&E's service area encompasses some of the most densely forested areas in California and, as a consequence, is subject to high risk from vegetation-related ignition events. Further, environmental extremes, such as drought conditions and extreme heat followed by periods of wet weather, can drive additional vegetation growth (which can then fuel fires) and influence both the likelihood and severity of extraordinary wildfire events.

In particular, the risk posed by wildfires has increased in PG&E's service area as a result of an ongoing extended period of drought, bark beetle infestations in the California forest, and wildfire fuel increases due to rising temperatures and record rainfall following the drought, and strong wind events, among other environmental factors.

More than half of PG&E's service area is in a HFTD, as designated by the CPUC. Contributing factors other than environmental can include local land use policies and historical forestry management practices.

PG&E is approaching this issue with urgency to prevent our facilities from creating public safety risks. PG&E's annual Wildfire Mitigation Plan (WMP) outlines PG&E's broad program to reduce wildfires, with many complementary parts that work together to boldly address California's evolving wildfire risk and describes PG&E's comprehensive and multi-faceted wildfire safety strategy, utilizing programs and actions that have proven effective at reducing wildfire risk and expanding innovative programs and actions initiated in prior years.

**Time horizon**

Short-term

**Likelihood**

Likely

**Magnitude of impact**

High

**Are you able to provide a potential financial impact figure?**

No, we do not have this figure

**Potential financial impact figure (currency)**

**Potential financial impact figure – minimum (currency)**

## Potential financial impact figure – maximum (currency)

### Explanation of financial impact figure

The potential financial figure is unknown but could be substantial. Specifically regarding wildfires, California law includes a doctrine of inverse condemnation that is routinely invoked in the state. If PG&E's facilities, such as its electric distribution and transmission lines, are determined to be the substantial cause of fires, and inverse condemnation applies, PG&E could be liable for property damage, business interruption, interest, and attorneys' fees without having been found negligent.

PG&E Corporation and PG&E have significant contingencies related to wildfires. A provision for a loss contingency is recorded when it is both probable that a liability has been incurred and the amount of the liability can be reasonably estimated. For those liabilities, PG&E Corporation and PG&E record a charge that reflects their best estimate or the lower end of the range, if there is no better estimate. PG&E Corporation and PG&E have recorded aggregate charges of \$800 million, \$375 million, and \$1.15 billion in connection with the 2019 Kincadee fire, the 2020 Zogg fire, and the 2021 Dixie fire, respectively. These charges do not reflect insurance or other probable recoveries. They also do not record estimated losses that are not reasonably estimable.

In 2019, CA's Governor signed into law AB 1054, establishing a state-wide fund for eligible electric utility companies to pay eligible claims for liabilities arising from wildfires occurring after July 12, 2019 caused by a participating electric utility company's equipment, subject to AB 1054 terms and conditions (Wildfire Fund).

Electric utility companies that draw from the Wildfire Fund will only be required to repay amounts that are determined by the CPUC in an application for cost recovery not to be just and reasonable, subject to a disallowance cap equal to 20% of the IOU transmission and distribution equity rate base, a limit of 40% of the allowed amount of claims arising between the effective date of AB 1054, and PG&E's emergence from Chapter 11, and other conditions imposed by the statute.

The Fund is expected to be capitalized with \$10.5 billion of proceeds of bonds supported by a charge to ratepayers, \$7.5 billion in initial contributions from California's three electric IOUs, and \$300 million in annual contributions paid by California's three electric IOUs. Responsibility for the contributions from the IOUs are allocated according to each IOU's allocation metric, and PG&E's allocation metric is 64.2%.

### Cost of response to risk

15,222,739,000

### Description of response and explanation of cost calculation

As part of our ongoing efforts to mitigate wildfire threats, PG&E submitted our 2022 WMP to the CPUC. The WMP forecasts approximately \$15 billion in costs for the period

of 2020 to 2022 for PG&E's comprehensive and multi-faceted wildfire safety strategy, utilizing programs and actions that have proven effective at reducing wildfire risk and expanding innovative programs and actions initiated in prior years.

**Case Study:**

PG&E faces the risk of increased wildfire frequency and intensity in our service area. We must reduce wildfire risks and keep the customers and the communities we serve safe.

We are focusing our efforts on:

- Undergrounding 175 miles of powerlines in high fire-threat areas in 2022 as part of our multi-year goal of 10,000 miles.
- Strengthening the electric grid with stronger poles and covered lines to reduce wildfire risks.
- Enhanced Powerline Safety Settings (EPSS) in and near high fire-threat areas to quickly and automatically turn off power if a threat is detected.
- Reducing the impact of Public Safety Power Shutoffs (PSPS) by improving our technology and weather forecasting.
- Carefully managing trees and other vegetation, above and beyond state standards, to prevent wildfires and power outages.
- Installing microgrids that use generators to keep the electricity on during wildfire safety outages.
- Utilizing new and innovative technologies and safety tools to pinpoint how to best prevent and respond to the risk of wildfires.

Pacific Gas and Electric Company's 2022 WMP is available at [https://www.pge.com/en\\_US/safety/emergency-preparedness/natural-disaster/wildfires/wildfire-mitigation-plan.page](https://www.pge.com/en_US/safety/emergency-preparedness/natural-disaster/wildfires/wildfire-mitigation-plan.page)

**Comment**

Additional details for "Explanation of financial impact figure" are available at <https://www.cawildfirefund.com>.

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**Identifier**

Risk 4

**Where in the value chain does the risk driver occur?**

Direct operations

**Risk type & Primary climate-related risk driver**

Chronic physical

Other, please specify

Increased number and severity of heat waves / increased night-time temperatures

**Primary potential financial impact**

Increased indirect (operating) costs

### **Company-specific description**

Average and extreme temperatures are projected to increase in PG&E's service area over the course of the 21st century; coastal areas will remain cooler than inland areas, but both will rise. Increasing temperatures and more intense and prolonged heat events represent an increased risk to PG&E's electrical system and to the safety of PG&E's customers.

Peak loads are expected to increase with increasing temperatures due to direct impacts of ambient temperatures on equipment and direct impacts on electricity demand driven by rising air conditioning installation and usage.

The impacts of climate change on PG&E infrastructure are already a reality. Record breaking extreme heat and heat waves are now a regular occurrence throughout California. In the past two decades, PG&E's electric distribution system has experienced multiple, major outage-causing events associated with heat waves and peak loads.

During extreme heat days, PG&E must suspend the provision of power during Flex Alerts, which are voluntary calls for consumers to conserve electricity when energy demand approaches available capacity. PG&E may need to increase inspection and replacement operations of sensitive equipment. PG&E can also update design standards for sensitive equipment to increase reliability during heat events.

Power outages during high heat events present a public safety risk. PG&E is committed to providing safe and reliable power service across our service area. Findings from PG&E's Climate Vulnerability Assessment and other research efforts will be considered in the risk and strategic planning process.

### **Time horizon**

Short-term

### **Likelihood**

Likely

### **Magnitude of impact**

High

### **Are you able to provide a potential financial impact figure?**

Yes, an estimated range

### **Potential financial impact figure (currency)**

### **Potential financial impact figure – minimum (currency)**

150,000,000

### **Potential financial impact figure – maximum (currency)**

300,000,000

### **Explanation of financial impact figure**

In July 2006, an extreme heat event led to over 740,000 customer outages and damaged our electric distribution facilities. This heatwave was estimated to have a \$150-300 million direct impact on PG&E due to the costs to repair infrastructure and restore service and assumptions on the increased price of electricity due to peak-demand.

Of this amount, the total costs to restore service and repair facilities from these events amounted to approximately \$62 million. With electricity demand, the estimate is based on the fact that PG&E saw an increase in the cost of purchased power in 2006 compared to 2005; for the year, total purchased power increased 2,710 GWh and the average cost of purchased power increased \$0.005 per GWh. These increases were primarily caused by an increase in the volume of purchased power due to greater customer demand during the July 2006 heat storm.

These costs are still relevant, so we use them as a baseline. While this was a singular event, extreme heat events, even if rare, are projected to increase in frequency due to climate change.

### **Cost of response to risk**

52,000,000

### **Description of response and explanation of cost calculation**

PG&E's expenditures for demand response (DR) programs in 2021 were approximately \$52 million. This figure is calculated by tracking costs associated with the implementation of our programs (described further below), which enable customers to reduce energy use during periods of peak demand.

PG&E's Climate Vulnerability Assessment for the San Francisco Bay Area found that the number of days above 95 degrees F will increase from 11 days, historically, to 53 days by the end of the century. Extreme heat not only threatens public safety due to increased health risks but also places a strain on our electricity system and infrastructure as there is greater demand on the system to meet surging electricity demand for air conditioning.

#### **Case Study:**

In August 2020, a historic heat storm affected the Western U.S. for several consecutive days. PG&E's customers played an instrumental role through their participation in DR programs. Energy supply shortages led to two rotating power outages in the CAISO footprint. During the event, both residential and business customers participated in multiple DR programs, helping to reduce energy demand by about 220 MW. However, this heat event was also associated with over 200 distribution transformer outages across PG&E's service area.

In response, PG&E has launched new DR pilots, including the five-year Emergency Load Reduction Pilot, which provides financial incentives to eligible participants who voluntarily provide energy reductions during times of potential or actual stress on the CAISO transmission system.

PG&E's other DR programs include SmartRate, Peak Day Pricing, SmartAC [residential], Base Interruptible Program, and Capacity Bidding Program [commercial & industrial]. For example, the SmartAC Program (offered May-October) allows PG&E to send a signal to a customer's air conditioner, cycling it to use less energy. Additionally, SmartMeter data enables customers to reduce energy use during periods of peak demand.

In 2021, approximately 135,000 residential customers participated in the programs we offer, along with more than 110,000 larger commercial and industrial customers. As a result of our DR programs, PG&E and our customers had the ability to provide up to 212 MW of load reduction in 2021. Additionally, altogether, we enrolled approximately 125 MW to mitigate anticipated reliability challenges for the summer of 2021.

## Comment

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### Identifier

Risk 5

### Where in the value chain does the risk driver occur?

Direct operations

### Risk type & Primary climate-related risk driver

Acute physical

Other, please specify

Increased severity and frequency of extreme weather events such as cyclones and floods

### Primary potential financial impact

Increased indirect (operating) costs

### Company-specific description

Storm events in PG&E's service area can significantly impact PG&E's operations. Storm events can cause direct damage to equipment and subsequent customer outages, as well as impair both essential day-to-day operations as well as emergency response operations before and after a storm—all of which may increase operational costs, increase the risk to worker and public safety, and decrease the reliability of the electrical grid.

PG&E participated in the Bay Area Council Economic Institute's 2015 Surviving the Storm report, which looked at the economic impact of a Superstorm and associated flooding on the Bay Area economy. The report concluded that a Superstorm and the associated flooding would be detrimental to PG&E both physically and economically, identifying several Bay Area substations that are at risk.

The report identified the potential for a \$10.4 billion impact on the greater San Francisco Bay Area economy; of that total, PG&E estimated experiencing a \$125 million impact based on six of PG&E's Bay Area substations. This estimate represents the associated outage cost—or loss of value—to PG&E customers, not the cost of replacing or repairing equipment. In the Bay Area, 355,000 residents (6% of the total exposed) live within a 100-year floodplain while over a million (17%) live in a 500-year floodplain.

PG&E's Climate Vulnerability Assessment is identifying assets and operations that will be exposed to extreme storm events such as high wind, high rain, and heavy snow, to identify which assets and operations are most sensitive to these hazards. The assessment will provide needed data and options to inform our asset management strategy and other processes to enable PG&E to make investments that are prioritized to mitigate these potential risks.

**Time horizon**

Medium-term

**Likelihood**

Likely

**Magnitude of impact**

High

**Are you able to provide a potential financial impact figure?**

Yes, an estimated range

**Potential financial impact figure (currency)**

**Potential financial impact figure – minimum (currency)**

1

**Potential financial impact figure – maximum (currency)**

125,000,000

**Explanation of financial impact figure**

In April 2015, the Bay Area Council Economic Institute published "Surviving the Storm," a report that finds that a Superstorm and the associated flooding could have a \$10.4 billion impact on the Bay Area economy. Included in the report is PG&E's estimate that disruption to our Bay Area substations could result in an economic impact of up to \$125 million. This estimate represents the associated outage cost—or loss of value—to PG&E customers, not the cost of replacing or repairing equipment.

**Cost of response to risk**

114,700,000

**Description of response and explanation of cost calculation**

The CPUC allows utilities to recover the reasonable, incremental costs of responding to catastrophic events through a Catastrophic Event Memorandum Account (CEMA). The

CEMA authorizes PG&E to recover costs incurred in connection with a catastrophic event that has been declared a disaster or state of emergency by competent federal or state authorities. For example, the recorded costs associated with repairing facilities and restoring service associated with the 2021 winter storms occurring in October, January, and December in CEMA totaled approximately \$114.7 million and are estimated to have damaged approximately 11,020 of PG&E's electric distribution facilities, and disrupted service to approximately 685,000 electric customers across PG&E's service area.

**Case Study:**

Severe storms could have both financial and operational impacts on PG&E. Severe storms can cause infrastructure damage, customer outages, and increase operational costs. To mitigate these impacts, PG&E is working to identify upgrades to equipment standards, asset management strategies, and processes to ensure mitigation efforts are implemented in areas of increased risk and areas of high socio and economic vulnerability.

As a key part of this effort, PG&E is conducting a multi-year, service area-wide Climate Vulnerability Assessment, using the best available climate projections for California to evaluate climate hazards and risks to PG&E's assets, operations, and services.

PG&E also maintains emergency response plans and procedures to mitigate, prepare for, and respond to extreme storms. For example, in December 2021, a series of winter storms produced wet and windy conditions that caused trees, limbs, and other debris to fall into power lines, damage equipment, and interrupt electric service.

With tens of thousands of customers out of power, PG&E crews worked to safely restore service over the holiday season:

- We activated local and regional operations emergency centers in impacted regions to allocate staff and resources to restoration efforts.
- We distributed power poles, power lines, transformers, and other electric equipment from our three materials centers to restore power to impacted areas as quickly as possible.
- Our Geosciences team monitored potential post-wildfire debris flows from incoming rains which could impact PG&E's equipment and vegetation around our equipment.

**Comment**

Note: the \$114 million does not equate to PG&E's revenue requirement request in the CEMA filing.

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**Identifier**

Risk 6

**Where in the value chain does the risk driver occur?**

Direct operations

### **Risk type & Primary climate-related risk driver**

Chronic physical

Other, please specify

Changes in precipitation patterns and extreme variability in weather patterns

### **Primary potential financial impact**

Increased indirect (operating) costs

### **Company-specific description**

PG&E owns and operates one of the nation's largest investor-owned hydroelectric systems, which relies on nearly 100 reservoirs located primarily in the higher elevations of California's Sierra Nevada and Southern Cascade mountain ranges. Climate change projections indicate that while the average levels of precipitation in PG&E's service area will vary over time, extreme wet and extreme drought periods are expected to become more frequent. PG&E faces the risk of reduced hydroelectric output because of an increased number of dry years, and additional spill past fully loaded powerhouses during the few very wet years.

As changes in the atmospheric water cycles occur and as temperatures continue to increase, it is expected that changes in groundwater will occur due to both natural and anthropogenic causes. This increased groundwater extraction is expected to lead to land subsidence in impacted areas, which poses a long-term risk to PG&E's infrastructure and operations.

Precipitation patterns tend to vary significantly from year to year and, nationwide, California experiences the greatest annual variation in annual precipitation. 2017 was one of the wettest water years on record, and both 2015 and 2021 were among the driest on record.

Historically, nearly two-thirds of California's storms that occur during the November through March five-month wet period are classified as Atmospheric Rivers (AR)-type events. As a result of climate change, these AR events have entered California with significantly warmer temperatures in recent years -- bringing rainfall rather than snowfall to increasingly high elevations. The decline in a measurable snowpack that would normally melt and runoff following the five-month wet season presents a trend of increased challenges for the hydro scheduler/reservoir planner.

Extreme precipitation can also cause a sharp increase in water levels, placing stress on hydroelectric infrastructure and reinforcing the importance of dam safety measures. Increased evapotranspiration and loss of snowpack reflectivity is occurring from climate change. The increased loss of moisture from the watershed results in less inflow to reservoirs and the increased loss of soil moisture stresses watershed vegetation, which in turn increases fire risk on the watersheds. In addition to disruptions in energy service, there is increased fire risk to hydroelectric facilities in the watersheds with consequent post-fire erosion and debris flow risk.

### **Time horizon**

Medium-term

**Likelihood**

Very likely

**Magnitude of impact**

Medium-high

**Are you able to provide a potential financial impact figure?**

No, we do not have this figure

**Potential financial impact figure (currency)**

**Potential financial impact figure – minimum (currency)**

**Potential financial impact figure – maximum (currency)**

**Explanation of financial impact figure**

The annual cost of impacts of climate change on hydroelectric production would vary greatly by year. In 2017, the Pacific Institute released an assessment of the costs to California of lost hydroelectricity during the five years of drought from 2012 to 2016. The report found that the five years of drought led to an increase in electricity costs of more than \$2.45 billion and the additional combustion of fossil fuels for electric generation also led to a 10% increase in the release of carbon dioxide from California power plants.

**Cost of response to risk**

151,000,000

**Description of response and explanation of cost calculation**

The \$151 million figure above represents the average annual operations and maintenance costs for PG&E's hydroelectric operations during 2011 to 2014, the primary years of California's recent drought.

**Case Study:**

California's recent drought saw near historically low levels of precipitation. During the drought, PG&E needed to conserve water in our reservoirs in the spring so more would be available during summer months. PG&E worked to reduce the required water releases from our reservoirs to lessen the drought's impact on the environment and prolong availability of water for downstream users' needs.

Longer-term, development and calibration of new distributed runoff forecasting models are enabling PG&E to improve planning and better manage increased variability and extremes. Possible storage projects that would help mitigate the expected snowpack decline could include the development of pump storage projects, new reservoir capacity, and additional capacity from other energy sources.

PG&E is engaging with state and local stakeholders and has adopted strategies such as maintaining higher winter carryover reservoir storage levels, reducing discretionary reservoir water releases, and collaborating on research and new modelling tools. Also, PG&E's climate resilience team is conducting a Climate Vulnerability Assessment to understand the exposure, vulnerability, and potential impact projected from changes in precipitation patterns on PG&E's assets and operations.

As a result, PG&E will be able to improve planning and better manage increased water variability and extremes as it works to balance the broader community and ecosystem need for water with the need to generate and supply electricity for its customers.

### **Comment**

Cost of management is difficult to determine as each year is dependent on the amount of precipitation received and the temperature (if the precipitation falls as rain or snow). There is an opportunity cost of winter and spring peak generation that is foregone for summer generation, but that is a calculated/optimized decision based on our water supply forecast and schedule optimization results -- not a cost of management but a cost associated with the lack of precipitation.

There are some opportunities to address the expected increase in the coefficient of variation for annual precipitation in the Sierra Nevada Region. PG&E's Power Generation Water Management organization may incur additional climate change costs from some or all the following: developing/enhancing distributed modelling tools, enhancing existing statistical runoff forecast tools to include additional snow courses and snow sensors outside of the targeted watershed/sub-basin, and installing additional soil moisture probes at selected snow sensors in the mid-elevation snow zone.

PG&E's Climate Vulnerability Assessment will seek to analyze the short- and long-term exposure, vulnerability, and risk of changes in atmospheric water cycles, storms, and drought periods to PG&E's hydroelectric cycle.

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### **Identifier**

Risk 7

### **Where in the value chain does the risk driver occur?**

Direct operations

### **Risk type & Primary climate-related risk driver**

Chronic physical

Sea level rise

### **Primary potential financial impact**

Increased capital expenditures

### **Company-specific description**

PG&E faces the risk of higher inundation and flooding potential at coastal and low elevation facilities and assets due to high tides, storm runoff, and storm surges—risks that will be exacerbated by sea level rise. This risk extends to all coastal electric, gas, and generation assets, as well as any coastal PG&E property or facilities.

Assets such as substations or other coastal facilities are at direct risk if the flood protection is not sufficient for future sea level rise. Similarly, transmission towers or distribution poles may face increased water exposure that may cause direct damage or corrosion damage to electrical equipment from increased exposure to salt water. The risk of groundwater intrusion or increased underground buoyant forces may also be at risk of increasing due to sea level rise, which may impact underground facilities or equipment putting assets at risk. PG&E is assessing the risk of sea level rise and associated flooding risk as part of its multi-year Climate Vulnerability Assessment.

**Time horizon**

Short-term

**Likelihood**

Likely

**Magnitude of impact**

Medium-high

**Are you able to provide a potential financial impact figure?**

No, we do not have this figure

**Potential financial impact figure (currency)**

**Potential financial impact figure – minimum (currency)**

**Potential financial impact figure – maximum (currency)**

**Explanation of financial impact figure**

The potential financial figure is unknown but could be substantial. The costs of preparing for sea level rise will depend on site specific information, including the existing elevation of assets and surrounding land characteristics. Replacing or relocating equipment or facilities can run in the thousands to millions of dollars, depending on the infrastructure asset. Levee design, permitting, and construction for individual sites can run into the tens of millions of dollars. Completely moving and rebuilding a substation is estimated to cost at least \$100 million. With the projected sea-level rise by 2050, coastal flooding will pose an increasing hazard in the decades to come.

As an example of the potential costs, the example below describes how PG&E partnered with the City of Menlo Park and other stakeholders to apply for a FEMA Building Resilience Infrastructure and Communities (BRIC) grant to fund the design and

construction of flood protection for a PG&E coastal substation and the surrounding community.

**Cost of response to risk**

10,130,000

**Description of response and explanation of cost calculation**

PG&E partnered with the City of Menlo Park and other stakeholders to apply for a FEMA BRIC grant to fund the design and construction of flood protection for a PG&E coastal substation and the surrounding community. The cost of response above includes the costs PG&E incurred for the grant application material (\$130,000) and a non-federal match amount (\$10 million) required for the FEMA application.

Case Study:

PG&E faces the risk of higher inundation and flooding potential at coastal and low elevation facilities and assets due to sea level rise when combined with high tides, storm runoff, and storm surges. PG&E must evaluate low elevation assets, generation, and property to determine site-specific sea-level rise risks.

For example, given the San Francisco Bay Area's population density, relocating substations exposed to coastal flooding would be a prohibitively expensive adaptive option. Rather, PG&E is actively partnering with public and private local stakeholders to address the shared threat of coastal flooding, allowing for electric service reliability and supporting community plans to sustainably manage coastal flooding.

Our FEMA BRIC application found that, if flooded from coastal storm surge, the substation would need to go offline and 300,000 customers would lose power for up to 5 days. If funded, this project would provide flood protection for the next 30 years for the substation and protect this critical infrastructure. The project was selected for FEMA funding and the agency is conducting required environmental reviews before awarding funds.

PG&E is also conducting a Climate Vulnerability Assessment to understand the exposure, vulnerability, and the potential impact sea level rise will have on PG&E's assets and operations. Where we identify risks, we intend to initiate temporary mitigation measures while we plan permanent engineered adaptations.

**Comment**

**C2.4**

**(C2.4) Have you identified any climate-related opportunities with the potential to have a substantive financial or strategic impact on your business?**

Yes

## C2.4a

**(C2.4a) Provide details of opportunities identified with the potential to have a substantive financial or strategic impact on your business.**

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**Identifier**

Opp1

**Where in the value chain does the opportunity occur?**

Direct operations

**Opportunity type**

Products and services

**Primary climate-related opportunity driver**

Development and/or expansion of low emission goods and services

**Primary potential financial impact**

Other, please specify

Reduced direct costs: The highlighted EV programs and compressed natural gas on-bill credits offer additional non-ratepayer funded incentives to customers to own clean fuel vehicles and reduce emissions.

**Company-specific description**

The Low Carbon Fuel Standard (LCFS) program is a core component of California's climate change strategy and is intended to reduce the carbon intensity of certain transportation fuels. Utilities in California, such as PG&E, are suppliers of low-carbon fuels, and can voluntarily opt-in to the program to generate and sell LCFS credits on behalf of their electric and natural gas vehicle customers through the LCFS program.

The opportunity is that the EV programs and compressed natural gas (CNG) on-bill credit described below offer additional non-ratepayer funded incentives to our customers to own clean fuel vehicles and contribute to emissions reductions in the transportation sector.

As background, PG&E earns credits when customers charge their EVs at home, at EV charging stations owned by PG&E, or purchase CNG for their vehicles from PG&E. We then sell these credits to LCFS-regulated parties. The CARB and the CPUC regulate how PG&E can use the revenue generated from the sale of the LCFS credits, which are separate from ratepayer dollars. PG&E passes the CNG credit proceeds as an on-bill credit for CNG vehicle drivers and uses the electric credit proceeds to fund programs that further support EV adoption.

**Time horizon**

Short-term

**Likelihood**

Likely

**Magnitude of impact**

Medium

**Are you able to provide a potential financial impact figure?**

Yes, a single figure estimate

**Potential financial impact figure (currency)**

253,000,000

**Potential financial impact figure – minimum (currency)**

**Potential financial impact figure – maximum (currency)**

**Explanation of financial impact figure**

The potential financial impact of this opportunity includes both the costs of program implementation (\$124 million) and the total incentives returned to customers (\$129 million):

- PG&E is implementing the five approved LCFS programs with a combined \$124 million in budget to further support PG&E customers.
- Additionally, since the launch of the California Clean Fuel Reward program in December 2020, PG&E has issued over 100,000 rebates to customers for the purchase of a new EV, distributing a total of \$129 million of incentives back to customers. In 2021, PG&E also issued \$0.5 million to our CNG customers as a bill credit.

PG&E will continue to participate in the LCFS program and distribute proceeds through various customer programs.

**Cost to realize opportunity**

400,000

**Strategy to realize opportunity and explanation of cost calculation**

Relative to the benefits, the cost to realize this opportunity is low, approximately \$400,000 annually, to cover the administrative and labor costs to participate in the LCFS program and generate credits. These overhead costs include regulatory reporting, sales and accounting, and program management.

**Case Study:**

Under California's LCFS program, PG&E earns credits when customers charge their EVs at home, at EV charging stations owned by PG&E, or purchase CNG for their vehicles from PG&E. We then sell these credits to LCFS-regulated parties. The CARB and the CPUC regulate how PG&E can use the revenue generated from the sale of the LCFS credits, which are separate from ratepayer dollars.

The LCFS program offers additional non-ratepayer funded incentives to our customers

to own clean fuel vehicles and contribute to emissions reductions in the transportation sector.

PG&E passes the CNG credit proceeds as an on-bill credit for CNG vehicle drivers and uses the electric credit proceeds to fund programs that further support EV adoption. These programs include the state-wide California Clean Fuel Reward Program, which provides a \$750 point-of-purchase incentive for new EVs, and five PG&E LCFS programs being implemented on various schedules in 2022 and 2023:

- Rebates for purchasing a pre-owned EV
- A charger direct install pilot for multifamily housing and small businesses
- Education and rebates for installing charging stations at residences without requiring panel upgrades
- A resilient charging pilot for EV drivers in HFTDs and PSPS-impacted areas
- A research and innovation fund to support small-scale studies to investigate new technologies and support future EV program development

Currently, the LCFS program is authorized until 2030 and PG&E has the opportunity to participate as long as we remain a supplier of low-carbon transportation fuel. PG&E constructively engages with CARB on matters relating to the LCFS and has been supportive of the program and its goals.

## Comment

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### Identifier

Opp2

### Where in the value chain does the opportunity occur?

Direct operations

### Opportunity type

Products and services

### Primary climate-related opportunity driver

Development of new products or services through R&D and innovation

### Primary potential financial impact

Other, please specify

Reduced direct costs: By partnering in methane emission reduction R&D efforts through research consortiums, PG&E shares costs with other utilities or oil and gas companies and keeps R&D activities cost-effective.

### Company-specific description

To reduce methane emissions from our gas operations, PG&E engages in numerous technology R&D efforts into new technologies to improve leak detection, quantification, and repair capabilities, as well as improvements in processes to limit the release of

methane into the atmosphere.

The opportunity is that by partnering in a number of these methane emission reduction R&D efforts through research consortiums, PG&E shares costs with other utilities or oil and gas companies. The average leverage ratio for the projects is higher than five, which means PG&E is paying approximately one-fifth of the research costs. This allows PG&E to keep R&D activities cost-effective.

**Time horizon**

Short-term

**Likelihood**

More likely than not

**Magnitude of impact**

Medium

**Are you able to provide a potential financial impact figure?**

Yes, an estimated range

**Potential financial impact figure (currency)**

**Potential financial impact figure – minimum (currency)**

18,448,461

**Potential financial impact figure – maximum (currency)**

27,672,691

**Explanation of financial impact figure**

PG&E's investment in technologies and strategies to detect and reduce methane emissions enables PG&E to reduce emissions associated with our natural gas transmission, storage, and distribution infrastructure in California. New technologies often provide benefits that evolve over time. Some of PG&E's projects are funded through research consortiums and their costs are shared with other utilities or oil and gas companies. The average leverage ratio for the projects is higher than five, which means PG&E is paying approximately one-fifth of the research costs. This allows PG&E to keep R&D activities cost-effective.

To estimate the financial impact figure, we estimated the value of natural gas saved associated with detection and repair activities, the social cost of the methane, and the avoided Cap-and-Trade emissions allowance costs. The figures used in the calculations include the following: City Gate price of natural gas \$3/mscf; social cost of methane of \$1,100 per ton, which is equivalent to approximately \$22/mscf; and avoided Cap-and-Trade emission allowances costs of \$3/mscf. This equals an estimated total of \$28/mscf. PG&E's 2015 baseline is 3,294,368 mscf. The range provided quantifies the potential financial impact figure associated with a 20-30% reduction below 2015 levels by 2025.

### **Cost to realize opportunity**

3,200,000

### **Strategy to realize opportunity and explanation of cost calculation**

The \$3.2 million cost associated with this work enables cost-sharing and supports various methane emissions technology R&D activities for 2022-2023. It includes costs for labor, equipment, operations, and research consortiums pursuing and testing methodologies and new technologies to reduce methane emissions from gas operations activities. The following examples describe the scope of work covered by the R&D funding.

#### **Case Study:**

When there's a leak on our natural gas system or we release gas for operational activities, methane is released into the atmosphere, contributing to climate change. To reduce methane emissions from our gas operations, PG&E is actively involved in a variety of innovative R&D initiatives.

For example, we partnered with NYSEARCH, a research consortium, to develop a framework to characterize emissions at transmission metering and regulating stations, helping to better quantify, report, and reduce these emissions. This allows us to prioritize leak repairs on larger emitters and assess emission reductions. We have also piloted new technologies, including RKI Instruments' open path laser spectrometer methane sensor, which we deployed to identify gas sources and support waterway leak surveys using an unmanned aerial system or drone. We're also testing a continuous monitoring ultrasonic system to detect leaks through isolation valves.

PG&E has been at the forefront of advanced mobile technology for compliance leak surveys with Picarro and through aerial surveys for our transmission system. Additionally, PG&E is engaged in R&D efforts on gas speciation to differentiate between biomethane and pipeline gas; piloting the use of small scale cross-compression for in-line inspection projects; and evaluating various emission rate quantification technologies and techniques.

By working together on many of these R&D efforts, PG&E has kept research cost-effective (paying approximately one-fifth of the research costs) and remained on track to reduce methane emissions by 20% by 2025 and achieve our voluntary goal of 45% by 2030, relative to a 2015 baseline.

### **Comment**

## C3. Business Strategy

### C3.1

**(C3.1) Does your organization's strategy include a transition plan that aligns with a 1.5°C world?**

Row 1

---

**Transition plan**

Yes, we have a transition plan which aligns with a 1.5°C world

**Publicly available transition plan**

Yes

**Mechanism by which feedback is collected from shareholders on your transition plan**

We have a different feedback mechanism in place

**Description of feedback mechanism**

PG&E Corporation's and PG&E's senior leadership presented our longer-term climate goals to investors during Investor Day, a gathering of investors to discuss PG&E Corporation's and PG&E's performance, progress, and plans for the future. During the event, our leaders reviewed the climate goals outlined in our Climate Strategy Report and our plan to bring about a clean energy future in partnership with our customers and others. We shared how the report will be our guiding document and our action plan for the years ahead.

PG&E's climate-related risk management and external engagement is also driven by an increased focus on alignment on shared outcomes among our leadership and within the organization.

PG&E has robust governance, operational, and strategic structures in place to manage the transition to a lower carbon economy and build climate resilience. Climate-related policies and programs are overseen by the Boards and senior management, facilitated by interdisciplinary teams, and implemented by each functional group. Functional groups also manage climate-related opportunities through the strategic business planning process, including for customer energy solutions and transportation electrification.

PG&E is also employing a Lean operating model to drive more effective and responsive decision-making by improving visibility, control, and predictability across our work. This model is fundamental to our ability to manage climate-related risks and opportunities by helping us identify gaps and quickly develop plans to support the teams performing the work. PG&E holds over 2,000 daily operating reviews, beginning with crews closest to the work and cascading up to senior leadership. For example, this system helped us

identify patterns in the conditions of wildfire ignitions and led to the implementation of EPSS.

**Frequency of feedback collection**

Annually

**Attach any relevant documents which detail your transition plan (optional)**

PG&E's Climate Strategy Report

**C3.2**

**(C3.2) Does your organization use climate-related scenario analysis to inform its strategy?**

| Use of climate-related scenario analysis to inform strategy |                                   |
|---|-----------------------------------|
| Row 1   | Yes, qualitative and quantitative |

**C3.2a**

**(C3.2a) Provide details of your organization's use of climate-related scenario analysis.**

| Climate-related scenario           | Scenario analysis coverage | Temperature alignment of scenario | Parameters, assumptions, analytical choices   |
|------------------------------------|----------------------------|-----------------------------------|---|
| Physical climate scenarios RCP 8.5 | Company-wide               |                                   | PG&E's climate risk scenario analysis utilizes RCP 8.5. As reported in IPCC AR5, the mean global temperature increase by late-century (2081-2100) under RCP 8.5 is 3.7°C relative to our standard 1986-2005 baseline. PG&E's assessment uses the best available climate science to inform PG&E's understanding of the vulnerabilities to our assets and operations to plausible future changes in climate-related hazards, including changes in average and extreme temperatures, precipitation and drought, sea level rise, wildfire, and cascading impacts such as landslide risk in wildfire burned areas. |
| Transition scenarios IEA B2DS      | Company-wide               |                                   | PG&E's climate-related scenario analysis includes projected emissions for our individual operational groups. Parameters affecting this scenario analysis include: <ul style="list-style-type: none"> <li>• California's natural gas demand projections</li> <li>• California's climate policies affecting PG&amp;E's electricity generation emissions</li> <li>• California's requirements for reductions in methane emissions from natural gas operations, as well as SF6 emissions from electrical infrastructure</li> </ul>  |

|  |  |  |   |
|--|--|--|---|
|  |  |  | <ul style="list-style-type: none"> <li>California’s regulations requiring reductions in vehicle fleet emissions</li> </ul> <p>In a number of areas, PG&amp;E set goals to reduce emissions beyond regulatory requirements. Specific strategies used in PG&amp;E’s 2030 climate scenario analysis included:</p> <ul style="list-style-type: none"> <li>Natural Gas System: Reduce methane emissions 45% by 2030.</li> <li>Electricity Supply: Deliver 70% RPS clean electricity by 2030, above the compliance obligation of 60%. Reduce output and emissions from PG&amp;E’s owned natural gas generation resources 40% by 2030.</li> <li>Vehicle fleet electrification: 100% light-duty, 50% medium-duty, and 20% heavy-duty vehicles by 2030.</li> </ul> |
|--|--|--|---|

### C3.2b

**(C3.2b) Provide details of the focal questions your organization seeks to address by using climate-related scenario analysis, and summarize the results with respect to these questions.**

**Row 1**

**Focal questions**

- (1) What are the most cost-effective pathways to achieving state-wide carbon neutrality by 2045 -- evaluating numerous scenarios and portfolios for effectiveness and cost?
- (2) What risks do different climate hazards pose to PG&E’s assets, operations, and services?

**Results of the climate-related scenario analysis with respect to the focal questions**

Focal question #1: PG&E commissioned a study to identify pathways to achieving state-wide carbon neutrality by 2045. PG&E used the study as an input to developing our own climate strategy for our customers and communities in Northern and Central California.

The study provided PG&E with greater clarity on what needs to happen over the next several decades to decarbonize California’s economy—and the general sequence and timing of changes necessary to do so at the lowest cost to society. At the same time, it reinforced the importance of remaining flexible to different pathways, processes, and technologies that could emerge. The study identified that:

- Transportation electrification is key to enabling California’s decarbonization goals between now and 2035.

- The transition to a carbon neutral economy will require substantial investment in renewable generation, electric transmission and distribution, carbon capture, and electrification of vehicles and buildings.
- With increasing electricity demand from buildings and transportation, California must also substantially invest in thermal generation with clean fuels and/or carbon capture and storage to maintain reliability.
- New, cross-sectoral partnerships will be needed, including the potential for hydrogen to be produced from electrolysis powered by surplus renewable energy on the grid.

DERs, such as rooftop solar and behind-the-meter energy storage, will also contribute to reaching carbon neutrality

Focal question #2: PG&E is conducting a multi-year, service area-wide Climate Vulnerability Assessment, using the best available climate projections for California to evaluate climate hazards and risks to PG&E’s assets, operations, and services. For example:

- Wildfires: PG&E is evaluating the projected change in wildfire acreage burned in 2050 relative to present day HFTD-designated areas. This will enable PG&E to factor future conditions into both our near- and longer-term planning.
- Sea-Level Rise and Coastal Flooding: PG&E is actively partnering with public and private local stakeholders to address the shared threat of coastal flooding, allowing for electric service reliability and supporting community plans to sustainably manage coastal flooding.
- Rising Ambient Temperatures and Extreme Heat Events: PG&E plans to replace aging equipment with assets rated for future temperature conditions. PG&E is developing climate-informed design guidance to support energy system engineers in updating equipment standards so that the grid becomes sufficiently resilient.
- Drought-Driven Subsidence: PG&E’s underground gas pipeline assets are sensitive to major geological shifts. Areas of greatest subsidence concern are in California’s Central Valley. PG&E’s geosciences and climate resilience teams are partnering to adequately assess and manage this hazard.
- Multi-Hazard: PG&E is sponsoring Climate READi: Power, an EPRI research initiative on power system climate resilience.

### C3.3

**(C3.3) Describe where and how climate-related risks and opportunities have influenced your strategy.**

| Have climate-related risks and opportunities influenced your strategy in this area? | Description of influence |
|---|--------------------------|
|   |                          |

|                              |            |  |
|------------------------------|------------|--|
| <p>Products and services</p> | <p>Yes</p> | <p>Risks/opportunities related to the growing demand for clean energy have influenced our product-related strategy and product portfolio.</p> <p>PG&amp;E owns and operates three natural gas-fired power plants totaling 1,400 MW with best-in-class emissions levels.</p> <p>Looking ahead, the dynamics of California’s energy landscape continue to evolve as policy and market forces drive greater penetration of renewable energy resources and energy storage technologies onto the grid. With these changes, we project a roughly 40% decline in output and emissions from our natural gas-fired facilities by 2030, relative to a 2015 baseline.</p> <p>With our low-carbon electricity supply, PG&amp;E is well positioned to meet the state’s requirement to supply 100% of retail sales from eligible renewable or zero-carbon resources by 2045. This trajectory provides an opportunity for PG&amp;E to enable the GHG emission reductions necessary for the transportation and buildings sectors (~40% and ~14% of the state’s emissions, respectively). About 50% of PG&amp;E’s delivered electricity came from RPS-eligible renewable energy in 2021—with more than 90% from greenhouse-gas free resources. As this grows and the transportation and building sectors are electrified, GHG emissions from these sectors will decline.</p> <p>As the operator of a dual-commodity energy system, PG&amp;E is uniquely positioned to lead the transition to a net zero energy system and shape the future natural gas system.</p> <p>PG&amp;E’s gas strategy focuses on a diversity of win-win options that will be needed to meet our climate goals—and those of California. Our vision is to evolve the gas system to be an affordable, safe, and reliable net zero energy delivery platform. While we are planning and investing for the system to evolve—to deliver cleaner fuels to meet gradually declining customer demand—over the coming decades, our gas system infrastructure will continue to play a vital role for our customers and the state as a storage, reliability, and resiliency resource.</p> <p>Recognizing the impact that electrification can have on our climate, we have been pleased to lend our support for local</p> |
|------------------------------|------------|--|

|  |            |  |
|--|------------|--|
|  |            | <p>efforts to promote all-electric new construction as a way to help reach our climate goals, partner with communities, and reduce future gas system costs, and we have offered letters of support for all-electric new construction codes or ordinances to dozens of cities and counties.</p>   |
| <p>Supply chain and/or value chain</p> | <p>Yes</p> | <p>We partnered with the Electric Utility Supply Chain Alliance to perform a greenhouse gas hotspot assessment of our non-energy related purchased goods and services. We learned that our suppliers in the construction services, vegetation management, and manufacturing industries represent over 60% of these Scope 3 upstream emissions. To further reduce emissions in our supply chain, we're focused on partnering with these suppliers through our annual assessment and by offering them in-depth greenhouse gas emissions training to help measure their carbon footprint.</p> <p>Looking ahead, we've established a roadmap through 2030 that focuses on engaging with suppliers in the construction services, vegetation management, and manufacturing industries to measure their Scope 1 and 2 greenhouse gas emissions and establish reduction goals. Our plan is to require these targeted suppliers to share their emissions data and reduction goals with PG&amp;E starting in 2025. Our 2030 goal is to have 100% of these supplier partners establish a science-based target or a longer-term net zero goal.</p> <p>Additionally, establishing a multi-pronged approach to tackle sulfur hexafluoride (SF6) is part of PG&amp;E's strategy to establish relationships with suppliers whose values and services align with our climate commitment.</p> <p>PG&amp;E began to purchase and pilot circuit breakers and gas insulated switchgear that does not contain SF6 gas at the 72kV level in 2017 and continues to phase in circuit breakers at the 72kV and 115kV levels.</p> <p>PG&amp;E's roadmap outlines a strategy to integrate non-SF6 equipment through 2030 and beyond as non-SF6 equipment becomes available from vendors. PG&amp;E is working with suppliers to integrate innovative SF6-free equipment into our system ahead of California's stringent requirements. This includes installing the industry's first 123 kV circuit breakers with clean-air vacuum technology.</p> |

|                   |     |  |
|-------------------|-----|--|
| Investment in R&D | Yes | <p>As a regulated electric and natural gas utility, PG&amp;E leverages technology R&amp;D. One key program is the Electric Power Investment Charge (EPIC), established through the CPUC to provide funding for applied R&amp;D, technology demonstration and deployment, and market facilitation of clean energy technologies and approaches.</p> <p>PG&amp;E was approved to administer 20% of the EPIC funding in an amount proportional to the amount collected.</p> <p>PG&amp;E continued our focus on wildfire safety, resiliency, and renewable integration by launching new projects to drive innovation in:</p> <ul style="list-style-type: none"> <li>• Leveraging front-of-the-meter and behind-the-meter distributed energy resources for customer-enabled resilient microgrids.</li> <li>• Transformer monitoring via field area network. Advanced transformer protection.</li> <li>• Automated fire detection from wildfire alert cameras. Advanced electric inspection tools (wood poles).</li> <li>• Operational vegetation management efficiency through novel onsite equipment.</li> </ul> <p>To meet our longer-term climate goals, PG&amp;E plans to significantly scale our efforts to decarbonize the electric system—to accommodate a shift to vehicle electrification, integrate a proliferation of distributed energy resources, and achieve higher integration of renewable energy combined with investments in the grid and energy storage.</p> <p>PG&amp;E pledged a commitment of \$25 million through 2030 in R&amp;D toward sustainable uses for woody biomass, working in collaboration with other partners to build upon and ramp up PG&amp;E activities.</p> <p>One promising area is the opportunity to convert woody biomass to a source of RNG. To date, PG&amp;E has funded several of these types of R&amp;D projects at a small scale with a focus on economic analyses and proof of concept physical demonstration projects. Additional R&amp;D funding will enable PG&amp;E to more proactively help advance these demonstration projects into full scale pilots.</p> <p>PG&amp;E also continues to invest in battery energy storage, which enhances overall grid reliability, integrates renewables,</p> |
|-------------------|-----|--|

|                   |            |   |
|-------------------|------------|---|
|                   |            | <p>and helps customers save energy and money. We have contracts for battery energy storage projects totaling more than 3,300 MW of nameplate capacity to be deployed through 2024.</p>  |
| <p>Operations</p> | <p>Yes</p> | <p>The most prominent component of our short-term strategy (over the next five years) that has been influenced by climate change is our exposure to wildfire risk. High winds can cause tree branches and debris to contact energized electric lines, damage our equipment, and cause a wildfire. California continues to experience an increase in wildfire risk and a longer wildfire season. Today, more than half of our service area is in a HFTD, as designated by the CPUC (as referenced in C2.3a).</p> <p>In 2021, we unveiled two new initiatives to further reduce the risk of wildfires: Undergrounding and Enhanced Powerline Safety Settings (EPSS).</p> <p>Undergrounding: We plan to underground approximately 3,600 miles between 2022 and 2026 as the work scales from 175 targeted miles in 2022 up to 1,200 miles in 2026.</p> <p>EPSS: Starting in July 2021, to help prevent wildfires during the hot and dry season, PG&amp;E began adjusting the sensitivity settings on some of our circuits in high fire threat areas to turn off power quickly and automatically if the system detects a problem.</p> <p>Our Wildfire Mitigation Plan includes short-, medium- and long-term plans to reduce wildfire risk and keep our customers and communities safe. It includes new grid technology, a critical hardening of the electric system, enhanced vegetation management, and more. It also includes listening sessions with stakeholders to improve our programs going forward.</p> <p>We are delivering more assistance and outreach to help vulnerable customers, including medical baseline customers and tribal communities, among others. For example, we are partnering with the Disability Disaster Access and Resources program, in partnership with the California Foundation for Independent Living Centers, to provide support to vulnerable customers before and during PSPS events.</p> <p>We are also actively working with tribal governments to</p> |

|  |  |  |
|--|--|--|
|  |  | <p>prepare their communities for PSPS events and obtain feedback from those that were impacted by prior events. Other initiatives include our Portable Battery Program, which provides no-cost backup portable batteries to low-income customers enrolled in the medical baseline program that rely on power for medical or independent living needs and reside in high fire-threat areas.</p> |
|--|--|--|

### C3.4

**(C3.4) Describe where and how climate-related risks and opportunities have influenced your financial planning.**

|       | Financial planning elements that have been influenced      | Description of influence   |
|-------|--|--|
| Row 1 | Revenues<br>Direct costs<br>Capital expenditures<br>Assets | <p>Capital Expenditures: Our climate continues to change—and California continues to experience an increase in wildfire risk and a longer wildfire season. Today, more than half of our service area is in a HFTD, as designated by the CPUC</p> <p>PG&amp;E outlined plans in our annual Wildfire Mitigation Plan (WMP) to spend \$6 billion on wildfire mitigation over 2021-2022. PG&amp;E's 2021 WMP is intended to reduce the risk of wildfires in the CPUC's HFTD areas over the next three years from 2021-2023. The WMP incorporates lessons learned from the 2020 wildfire season and outlines the additional programs planned from 2021 to 2023 to prevent catastrophic wildfires.</p> <p>Key initiatives include: (1) Installing 250 sectionalizing devices able to limit the size of outages so fewer communities are without power during times of highest wildfire threat; (2) Hardening 180 distribution circuit miles to increase system resiliency; (3) Meeting and exceeding state vegetation and safety standards across 1,800 miles to manage vegetation near power lines that could cause a wildfire or power outage; (4) Installing switches to redirect power and keep communities energized; (5) Installing microgrids that use generators to keep the electricity on during PSPS events; (6) Utilizing additional state-of-the-art weather tools, including weather stations and high-definition cameras, to improve extreme weather forecasting that will help better predict and target where and when PSPS events are necessary; (7) Monitoring conditions in real-time from our Hazard Awareness and Warning Center to coordinate wildfire prevention and response; (8) Inspecting all lines and structures in Tier 3 areas and one-third of lines and structures in Tier 2 areas on the CPUC Fire-Threat Map to help reduce wildfire risks caused by equipment issues.</p> |

|  |  |  |
|--|--|--|
|  |  | <p>Additionally, PG&amp;E is undertaking a major new initiative to underground approximately 10,000 miles of powerlines in high fire risk areas. This commitment represents the largest effort in the United States to underground powerlines to reduce wildfire risk. We plan to underground approximately 3,600 miles between 2022 and 2026 as the work scales from 175 targeted miles in 2022 up to 1,200 miles in 2026. At the same time, the increased scope, gained efficiencies, and integrated best practices are projected to decrease the cost per mile for undergrounding from \$3.75 million per mile in 2022 to \$2.5 million per mile in 2026.</p> |
|--|--|--|

### C3.5

**(C3.5) In your organization's financial accounting, do you identify spending/revenue that is aligned with your organization's transition to a 1.5°C world?**

No, but we plan to in the next two years

## C4. Targets and performance

### C4.1

**(C4.1) Did you have an emissions target that was active in the reporting year?**

Absolute target

Intensity target

### C4.1a

**(C4.1a) Provide details of your absolute emissions target(s) and progress made against those targets.**

**Target reference number**

Abs 4

**Year target was set**

2018

**Target coverage**

Company-wide

**Scope(s)**

Scope 1

Scope 2

**Scope 2 accounting method**

Market-based

**Scope 3 category(ies)**

**Base year**

2016

**Base year Scope 1 emissions covered by target (metric tons CO2e)**

1,511,377

**Base year Scope 2 emissions covered by target (metric tons CO2e)**

28,623

**Base year Scope 3 emissions covered by target (metric tons CO2e)**

**Total base year emissions covered by target in all selected Scopes (metric tons CO2e)**

1,540,000

**Base year Scope 1 emissions covered by target as % of total base year emissions in Scope 1**

36

**Base year Scope 2 emissions covered by target as % of total base year emissions in Scope 2**

4

**Base year Scope 3 emissions covered by target as % of total base year emissions in Scope 3 (in all Scope 3 categories)**

**Base year emissions covered by target in all selected Scopes as % of total base year emissions in all selected Scopes**

31

**Target year**

2022

**Targeted reduction from base year (%)**

10

**Total emissions in target year covered by target in all selected Scopes (metric tons CO2e) [auto-calculated]**

1,386,000

**Scope 1 emissions in reporting year covered by target (metric tons CO2e)**

1,285,402

**Scope 2 emissions in reporting year covered by target (metric tons CO2e)**

24,343

### **Scope 3 emissions in reporting year covered by target (metric tons CO<sub>2</sub>e)**

#### **Total emissions in reporting year covered by target in all selected scopes (metric tons CO<sub>2</sub>e)**

1,309,745

#### **% of target achieved relative to base year [auto-calculated]**

149.5162337662

#### **Target status in reporting year**

Achieved

#### **Is this a science-based target?**

No, but we are reporting another target that is science-based

#### **Target ambition**

#### **Please explain target coverage and identify any exclusions**

In 2021, PG&E continued to track progress towards our Million Ton Challenge, a five-year greenhouse gas emission reduction goal for our operations, including our natural gas transmission and distribution system, vehicle fleet, and facilities. PG&E's voluntary goal is to avoid one million metric tons (MT) of cumulative greenhouse gas emissions from 2018 to 2022, compared to a 2016 baseline. It also entails a 10% reduction in absolute emissions by 2022.

#### **Plan for achieving target, and progress made to the end of the reporting year**

#### **List the emissions reduction initiatives which contributed most to achieving this target**

PG&E has exceeded our Million Ton Challenge goal one year early and are pursuing additional reductions in the final year. Through 2021, we've also achieved a 20%+ reduction in absolute emissions relative to the 2016 baseline, exceeding our 10% reduction goal. The largest contributing factor to achieving this target is PG&E's efforts to reduce methane emissions, including when repairing or replacing components and/or piping within our natural gas transmission and distribution system. Through the end of 2021, PG&E avoided over 1.4 million MT CO<sub>2</sub>-e from methane abatement activities, representing over 90% of avoided emissions as part of PG&E's Million Ton Challenge.

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#### **Target reference number**

Abs 1

#### **Year target was set**

2021

#### **Target coverage**

Company-wide

**Scope(s)**

Scope 1

Scope 2

**Scope 2 accounting method**

Market-based

**Scope 3 category(ies)**

**Base year**

2015

**Base year Scope 1 emissions covered by target (metric tons CO<sub>2</sub>e)**

5,040,456

**Base year Scope 2 emissions covered by target (metric tons CO<sub>2</sub>e)**

996,170

**Base year Scope 3 emissions covered by target (metric tons CO<sub>2</sub>e)**

**Total base year emissions covered by target in all selected Scopes (metric tons CO<sub>2</sub>e)**

6,036,626

**Base year Scope 1 emissions covered by target as % of total base year emissions in Scope 1**

100

**Base year Scope 2 emissions covered by target as % of total base year emissions in Scope 2**

100

**Base year Scope 3 emissions covered by target as % of total base year emissions in Scope 3 (in all Scope 3 categories)**

**Base year emissions covered by target in all selected Scopes as % of total base year emissions in all selected Scopes**

100

**Target year**

2030

**Targeted reduction from base year (%)**

50

**Total emissions in target year covered by target in all selected Scopes (metric tons CO<sub>2</sub>e) [auto-calculated]**

3,018,313

**Scope 1 emissions in reporting year covered by target (metric tons CO<sub>2</sub>e)**

4,458,777

**Scope 2 emissions in reporting year covered by target (metric tons CO<sub>2</sub>e)**

162,529

**Scope 3 emissions in reporting year covered by target (metric tons CO<sub>2</sub>e)**

**Total emissions in reporting year covered by target in all selected scopes (metric tons CO<sub>2</sub>e)**

4,621,306

**% of target achieved relative to base year [auto-calculated]**

46.8910944624

**Target status in reporting year**

New

**Is this a science-based target?**

Yes, we consider this a science-based target, and the target is currently being reviewed by the Science Based Targets initiative

**Target ambition**

Well-below 2°C aligned

**Please explain target coverage and identify any exclusions**

PG&E's goal is to reduce our Scope 1 and 2 emissions 50% by 2030 compared to a 2015 baseline, which equates to reducing emissions 51% from electric operations and 46% from natural gas operations. The primary reductions in Scope 1 and 2 emissions are projected to come from three categories: owned natural gas generation, methane emissions from the natural gas system, and electric transmission and distribution line losses.

**Plan for achieving target, and progress made to the end of the reporting year**

PG&E is deploying several strategies to reduce our Scope 1 and 2 emissions and made progress in 2021, including:

(1) Reducing methane emissions from our gas system by further detecting and repairing leaks, replacing targeted pipeline segments and equipment, and improving our operations to avoid and reduce "blowdowns" where natural gas is released to the atmosphere. In 2021, PG&E leveraged technologies, including mobile systems, drones, and advanced leak survey strategies to focus our leak detection efforts and maximize results. PG&E replaced or retrofitted 36 miles of targeted pipeline segments and equipment in 2021. Additionally, PG&E is implementing drafting, cross compression, flaring, and project bundling—separately and in combination—to reduce blowdowns.

(2) Accelerating installation of SF6-free equipment and actively reducing emissions from SF6-filled equipment. To reduce SF6 emissions from the electric system, PG&E focused on repairing the highest leaking circuit breakers, implementing SF6 cylinder best management practices, and accelerating the installation of SF6-free equipment ahead of California's stringent requirements. This included installing equipment such as the industry's first 123 kV circuit breakers with clean-air vacuum technology, which arrived at PG&E in 2021.

(3) Electrifying PG&E's vehicle fleet with 2030 goals: 100% of light-duty fleet, 50% of medium-duty fleet, and 20% of heavy-duty fleet. For vehicles that cannot be electrified, PG&E continued to use renewable diesel and RNG over standard fuels.

(4) Reducing emissions from buildings and facilities through LED lighting retrofits, lighting control upgrades, PV solar installations (paired with battery storage), and electrifying space and heating equipment. PG&E has expanded our use of on-site renewable energy by installing solar PV systems at seven large sites, giving PG&E a total of 2.7 million kWh of solar electric capacity in 2021. To date, PG&E has earned LEED certifications for 21 facilities.

(5) Reducing output and emissions from PG&E's owned natural gas plants to accommodate greater penetration of renewable energy sources and energy storage on the grid; and

(6) Reducing emissions from our gas compressor stations by retiring our Tionesta compressor station and exploring replacing our Los Medanos storage compressor unit with an electric motor-driven unit.

In 2021, PG&E achieved Scope 1 and 2 emissions reductions of 23%, compared with the 2015 baseline.

**List the emissions reduction initiatives which contributed most to achieving this target**

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**Target reference number**

Abs 2

**Year target was set**

2021

**Target coverage**

Company-wide

**Scope(s)**

Scope 1

Scope 3

**Scope 2 accounting method**

**Scope 3 category(ies)**

Category 3: Fuel-and-energy-related activities (not included in Scopes 1 or 2)

**Base year**

2015

**Base year Scope 1 emissions covered by target (metric tons CO2e)**

2,881,904

**Base year Scope 2 emissions covered by target (metric tons CO2e)**

**Base year Scope 3 emissions covered by target (metric tons CO2e)**

11,926,307

**Total base year emissions covered by target in all selected Scopes (metric tons CO2e)**

14,808,211

**Base year Scope 1 emissions covered by target as % of total base year emissions in Scope 1**

57.18

**Base year Scope 2 emissions covered by target as % of total base year emissions in Scope 2**

**Base year Scope 3 emissions covered by target as % of total base year emissions in Scope 3 (in all Scope 3 categories)**

24.59

**Base year emissions covered by target in all selected Scopes as % of total base year emissions in all selected Scopes**

27.66

**Target year**

2030

**Targeted reduction from base year (%)**

60

**Total emissions in target year covered by target in all selected Scopes (metric tons CO2e) [auto-calculated]**

5,923,284.4

**Scope 1 emissions in reporting year covered by target (metric tons CO2e)**

2,487,912

**Scope 2 emissions in reporting year covered by target (metric tons CO2e)**

**Scope 3 emissions in reporting year covered by target (metric tons CO<sub>2</sub>e)**

780,391

**Total emissions in reporting year covered by target in all selected scopes (metric tons CO<sub>2</sub>e)**

3,268,303

**% of target achieved relative to base year [auto-calculated]**

129.8818608136

**Target status in reporting year**

New

**Is this a science-based target?**

Yes, we consider this a science-based target, and the target is currently being reviewed by the Science Based Targets initiative

**Target ambition**

Well-below 2°C aligned

**Please explain target coverage and identify any exclusions**

To comply with California's RPS requirements, PG&E must deliver renewable energy to our customers at a gradually increasing rate. Eligible renewable resources include photovoltaic, solar thermal, wind facilities, geothermal facilities, hydroelectric facilities with a capacity rating of 30 MW or less, biomass and biogas, selected municipal solid waste facilities, ocean thermal, tidal current, and wave energy generation technologies.

**Plan for achieving target, and progress made to the end of the reporting year**

PG&E has a proven performance record on clean energy, exceeding California's RPS goal for each utility to deliver 33% renewable energy by the end of 2020. In 2021, about 50% of our customers' electricity came from specified eligible renewable resources—including biopower, geothermal, small hydroelectric, solar, and wind power—and, overall, more than 90% came from greenhouse gas-free resources.

Large-scale solar energy accounted for the largest portion of PG&E's total renewable energy power mix. We have over 250 RPS-eligible power purchase contracts, totaling over 6,500 MW of renewable energy nameplate capacity. Of that, about two-thirds is solar energy. PG&E also owns more than 430 MW of eligible renewable generation, including 13 solar power plants, which are mainly located in California's Central Valley and generate up to 152 MW of clean power.

As part of our climate goals, PG&E set a voluntary goal to deliver 70% RPS clean electricity by 2030, which is above the RPS compliance obligation of 60%. PG&E uses a variety of approaches to achieve our renewable energy goals, including leveraging competitive solicitations to procure renewable energy from third parties and owning renewables projects ourselves. PG&E develops an Integrated Resource Plan, as required by the CPUC, to ensure that future energy portfolios meet California's clean energy goals in a reliable and cost-effective manner. We work with regulators,

environmental organizations, and other stakeholders to ensure that we continue to manage our portfolio responsibly and in a way that is affordable for customers.

**List the emissions reduction initiatives which contributed most to achieving this target**

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**Target reference number**

Abs 3

**Year target was set**

2021

**Target coverage**

Company-wide

**Scope(s)**

Scope 3

**Scope 2 accounting method**

**Scope 3 category(ies)**

Category 3: Fuel-and-energy-related activities (not included in Scopes 1 or 2)

Category 5: Waste generated in operations

Category 6: Business travel

Category 7: Employee commuting

Category 11: Use of sold products

**Base year**

2015

**Base year Scope 1 emissions covered by target (metric tons CO<sub>2</sub>e)**

**Base year Scope 2 emissions covered by target (metric tons CO<sub>2</sub>e)**

**Base year Scope 3 emissions covered by target (metric tons CO<sub>2</sub>e)**

48,501,239

**Total base year emissions covered by target in all selected Scopes (metric tons CO<sub>2</sub>e)**

48,501,239

**Base year Scope 1 emissions covered by target as % of total base year emissions in Scope 1**

**Base year Scope 2 emissions covered by target as % of total base year emissions in Scope 2**

**Base year Scope 3 emissions covered by target as % of total base year emissions in Scope 3 (in all Scope 3 categories)**

100

**Base year emissions covered by target in all selected Scopes as % of total base year emissions in all selected Scopes**

100

**Target year**

2030

**Targeted reduction from base year (%)**

75

**Total emissions in target year covered by target in all selected Scopes (metric tons CO<sub>2</sub>e) [auto-calculated]**

12,125,309.75

**Scope 1 emissions in reporting year covered by target (metric tons CO<sub>2</sub>e)**

**Scope 2 emissions in reporting year covered by target (metric tons CO<sub>2</sub>e)**

**Scope 3 emissions in reporting year covered by target (metric tons CO<sub>2</sub>e)**

42,098,735

**Total emissions in reporting year covered by target in all selected scopes (metric tons CO<sub>2</sub>e)**

42,098,735

**% of target achieved relative to base year [auto-calculated]**

17.6009359266

**Target status in reporting year**

New

**Is this a science-based target?**

No, but we are reporting another target that is science-based

**Target ambition**

**Please explain target coverage and identify any exclusions**

PG&E's goal is to reduce Scope 3 emissions by 25% by 2030, compared to a 2015 baseline. More than 99% of the Scope 3 emissions reductions are projected to come

from two categories: natural gas supplied to PG&E customers and electricity purchased on behalf of PG&E customers. Other areas include business air travel, employee commuting, and waste emissions. On an annual basis, PG&E measures, obtains third-party verification for, and reports these emissions to the The Climate Registry as part of our annual corporate GHG emissions inventory. To avoid double-counting, Scope 3 emissions from natural gas supplied to PG&E customers excludes natural gas used by generating stations to generate electricity delivered to customers; these emissions are captured in electricity purchased on behalf of customers.

### **Plan for achieving target, and progress made to the end of the reporting year**

PG&E is taking a strategic, collaborative approach to reduce our Scope 3 emissions: We will continue to green the power sector toward delivering decarbonized electricity 24 x 7 x 365. This includes our voluntary goal to deliver 70% RPS clean electricity by 2030, which is above the RPS compliance obligation of 60%. In 2021, about 50% of our customers' electricity came from specified eligible renewable resources. PG&E also continues to invest in energy storage, and has contracts for storage projects totaling more than 3,300 MW of nameplate capacity to be deployed through 2024.

We will also enable building electrification in an orderly transition and shape the future natural gas delivery system. This includes our goal to align our customer building electrification programs with the timing, scope, and goals of PG&E's targeted gas system transition. It also includes a goal to execute zonal electrification and create a repeatable model on how to best perform it. To do so, we will evaluate gas capital projects for electrification as an alternative to the planned gas projects and pursue electrification for the projects evaluated as feasible and cost-effective and create a new program that seeks to zonally electrify three to five communities, with a specific focus on the decarbonization of vulnerable communities.

We will also "green" the gas supply for hard-to-electrify customers. This includes delivering 15% RNG in PG&E's core gas throughput. We've also pledged \$25 million toward sustainable uses for woody biomass in collaboration with other partners, including R&D on converting wood waste to RNG. We anticipate we'll have six RNG projects connected to our system by the end of 2022, and several more in the next few years.

It also includes maximizing readiness for hydrogen blending; we will operationalize a hydrogen pilot project by 2024 using different vintage gas pipes in a stand-alone system so we can test different hydrogen blends in pipes used in our system and help inform a safe level of hydrogen we can blend into the existing system by 2030. Working with a number of partners, we've launched the nation's most comprehensive end-to-end hydrogen study and demonstration facility to prepare for the hydrogen future and gain experience in different aspects of handling hydrogen.

### **List the emissions reduction initiatives which contributed most to achieving this target**

## C4.1b

**(C4.1b) Provide details of your emissions intensity target(s) and progress made against those target(s).**

---

**Target reference number**

Int 1

**Year target was set**

2011

**Target coverage**

Company-wide

**Scope(s)**

Scope 1

**Scope 2 accounting method**

**Scope 3 category(ies)**

**Intensity metric**

Other, please specify  
SF6 system wide leak rate

**Base year**

2011

**Intensity figure in base year for Scope 1 (metric tons CO2e per unit of activity)**

66,840

**Intensity figure in base year for Scope 2 (metric tons CO2e per unit of activity)**

**Intensity figure in base year for Scope 3 (metric tons CO2e per unit of activity)**

**Intensity figure in base year for all selected Scopes (metric tons CO2e per unit of activity)**

66,840

**% of total base year emissions in Scope 1 covered by this Scope 1 intensity figure**

0.8

**% of total base year emissions in Scope 2 covered by this Scope 2 intensity figure**

**% of total base year emissions in Scope 3 (in all Scope 3 categories) covered by this Scope 3 intensity figure**

**% of total base year emissions in all selected Scopes covered by this intensity figure**

0.8

**Target year**

2021

**Targeted reduction from base year (%)**

90

**Intensity figure in target year for all selected Scopes (metric tons CO<sub>2</sub>e per unit of activity) [auto-calculated]**

6,684

**% change anticipated in absolute Scope 1+2 emissions**

1

**% change anticipated in absolute Scope 3 emissions**

0

**Intensity figure in reporting year for Scope 1 (metric tons CO<sub>2</sub>e per unit of activity)**

37,182

**Intensity figure in reporting year for Scope 2 (metric tons CO<sub>2</sub>e per unit of activity)**

**Intensity figure in reporting year for Scope 3 (metric tons CO<sub>2</sub>e per unit of activity)**

**Intensity figure in reporting year for all selected Scopes (metric tons CO<sub>2</sub>e per unit of activity)**

37,182

**% of target achieved relative to base year [auto-calculated]**

49.3018152803

**Target status in reporting year**

Underway

**Is this a science-based target?**

No, but we are reporting another target that is science-based

**Target ambition**

**Please explain target coverage and identify any exclusions**

This SF6 target supports PG&E's Million Ton Challenge goal (Abs 4) and PG&E's goal to reduce Scope 1 and 2 emissions by 50% compared to a 2015 baseline (Abs1). PG&E continues to implement controls and tracking measures to enhance our SF6 reduction program in compliance with California regulations, which require that the maximum annual SF6 emission rate decline from 10% in 2011 to 1% in 2020 and beyond. As part of a multi-year effort, PG&E is piloting the installation of SF6-free high-voltage circuit breakers and gas-insulated switchgear. This includes installing equipment such as the industry's first 123 kV circuit breakers with clean-air vacuum technology, which arrived at PG&E in 2021.

**Plan for achieving target, and progress made to the end of the reporting year**

PG&E is taking a multi-pronged approach to tackle SF6—repairing the highest leaking circuit breakers, implementing SF6 cylinder best management practices, phasing-in SF6-free equipment, and engaging in the CARB regulatory amendments process to phase-out SF6. This included repairing or replacing nearly 40 targeted circuit breakers in 2021 to reduce emissions. Additionally, we received our first two SF6-free 123 kV circuit breakers with clean-air vacuum technology. We worked with the manufacturer to research, develop, and pilot the equipment, the first SF6-free circuit breakers ever made at this voltage level.

In 2021, PG&E's SF6 emission rate was 0.7%.

**List the emissions reduction initiatives which contributed most to achieving this target**

## C4.2

**(C4.2) Did you have any other climate-related targets that were active in the reporting year?**

Target(s) to reduce methane emissions  
Net-zero target(s)

## C4.2b

**(C4.2b) Provide details of any other climate-related targets, including methane reduction targets.**

---

**Target reference number**

Oth 1

**Year target was set**

2018

**Target coverage**

Company-wide

**Target type: absolute or intensity**

Absolute

**Target type: category & Metric (target numerator if reporting an intensity target)**

Methane reduction target

Other, please specify

Total annual volume of natural gas leaks and emissions (Mscf)

**Target denominator (intensity targets only)**

**Base year**

2015

**Figure or percentage in base year**

3,294,368

**Target year**

2025

**Figure or percentage in target year**

2,635,494

**Figure or percentage in reporting year**

1,372,783

**% of target achieved relative to base year [auto-calculated]**

291.6468095569

**Target status in reporting year**

Underway

**Is this target part of an emissions target?**

This methane reduction target supports PG&E's Million Ton Challenge goal (Abs 4) and PG&E's goal to reduce Scope 1 and 2 emissions by 50% compared to a 2015 baseline (Abs1). PG&E's Million Ton Challenge includes PG&E's activities to reduce methane emissions from our natural gas transmission and distribution system through leak detection and repair, pipeline replacement, and reducing transmission pipeline blowdowns. Natural gas distribution and transmission methane emissions totaled 1.54 million metric tons CO<sub>2</sub>e in 2016, the baseline year for the Million Ton Challenge.

**Is this target part of an overarching initiative?**

Reduce short-lived climate pollutants

**Please explain target coverage and identify any exclusions**

PG&E's goal is to reduce methane emissions by 20% by 2025 and 45% by 2030, relative to a 2015 baseline. PG&E's natural gas transmission and distribution system leak abatement program includes annual methane emission tracking and reporting, and a biennial best practice compliance plan submission.

**Plan for achieving target, and progress made to the end of the reporting year**

After four years, we've already exceeded our five-year target of avoiding one million tons—and are pursuing additional reductions in the final year by reducing methane emissions from natural gas operations and other strategies. When there's a leak on our natural gas system or we release gas for operational activities, methane is released into the atmosphere, contributing to climate change. PG&E is taking a variety of steps to reduce methane emissions by 45% by 2030:

- (1) Finding and fixing methane leaks on our system— leveraging technologies, including mobile systems, drones, and advanced leak survey strategies to focus our efforts and maximize results.
- (2) Replacing targeted pipeline segments and equipment.
- (3) Implementing drafting, cross compression, flaring, and project bundling—separately and in combination—to reduce “blowdowns” or the amount of natural gas released to the atmosphere during construction and repair projects on our gas transmission system.

We can drive additional emission reductions through further leak detection and repair and improvements in operations to avoid and reduce blowdowns. Beyond these strategies, we will also focus on improving methods to measure the emission reductions.

PG&E estimates that leak survey and repair initiatives were responsible for a total annual reduction of approximately 218.7 MMscf in 2021. Transmission pipeline blowdown natural gas savings totaled 801.4 MMscf in 2021.

**List the actions which contributed most to achieving this target**

## C4.2c

**(C4.2c) Provide details of your net-zero target(s).**

---

**Target reference number**

NZ1

**Target coverage**

Company-wide

**Absolute/intensity emission target(s) linked to this net-zero target**

Abs1

Abs2

Abs3

**Target year for achieving net zero**

2040

**Is this a science-based target?**

No, but we are reporting another target that is science-based

**Please explain target coverage and identify any exclusions**

PG&E is committed to reaching a net zero energy system in 2040—five years ahead of California’s carbon neutrality goal. This means that by 2040, we aim to substantially reduce our Scope 1, 2, and 3 GHG emissions, and then neutralize any remaining residual emissions in 2040 and thereafter.

**Do you intend to neutralize any unabated emissions with permanent carbon removals at the target year?**

Yes

**Planned milestones and/or near-term investments for neutralization at target year**

PG&E has committed to set near-term company-wide emission reductions in line with climate science with the SBTi. To track progress, we will continue our rigorous effort to complete a comprehensive, verified greenhouse gas emissions inventory each year across our Scope 1, 2, and 3 emissions.

Achieving a net zero energy system by 2040 will build upon our 2030 climate goals and will have significant implications for PG&E’s energy delivery system over the coming decades. As the operator of a dual-commodity energy system, PG&E is uniquely positioned to lead this transition and shape the future—all with a continued focus on helping our customers and hometowns prosper.

To meet our longer-term climate goals, PG&E plans to significantly scale our efforts to decarbonize the electric system—to accommodate a game-changing shift to vehicle electrification, integrate a proliferation of distributed energy resources, and achieve next-level penetration of renewable energy combined with investments in the grid and energy storage.

We also plan to transition to cleaner fuels, increasingly target gas delivery for hard-to-electrify customer sectors, and support efforts to ramp up building electrification. Our objective is to do so in an orderly manner to achieve a positive customer and community experience, while reducing gas system investments in targeted electrified communities.

We expect a diverse mix of resources to be available—from broad electrification to cleaner fuels such as RNG and hydrogen to nature-based solutions and carbon capture, storage, and utilization.

Over the next two decades, innovations in technology and markets will inform the most beneficial balance of these resources to meet the evolving needs of our customers. Fundamentally, we believe it's a matter of "how much" of each resource will be deployed versus "if" we will use a diversity of resources. How much will be driven by factors such as customer acceptance, technology maturity, and cost.

**Planned actions to mitigate emissions beyond your value chain (optional)**

We're excited about the opportunity to go beyond reducing our own emissions and achieving "Scope 4" reductions by enabling the customers and communities we serve to reduce their carbon footprints, as well. This work will build upon our 2030 climate goals which focus on supporting customers and the state's climate goals through:

- Offering energy efficiency and electrification programs
- Unleashing the full potential of electric vehicles
- Converting industrial and large customers from high carbon-intensity fuels to natural gas

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**Target reference number**

NZ2

**Target coverage**

Company-wide

**Absolute/intensity emission target(s) linked to this net-zero target**

Abs1

Abs2

Abs3

**Target year for achieving net zero**

2050

**Is this a science-based target?**

Yes, we consider this a science-based target, and we have committed to seek validation of this target by the Science Based Targets initiative in the next 2 years

**Please explain target coverage and identify any exclusions**

PG&E's commitment to becoming "climate positive" by 2050 will take us further than net zero carbon emissions—meaning that PG&E will work to reduce and remove more greenhouse gases than we emit and help enable our customers and hometowns to shrink their carbon footprint, as well. PG&E's climate positive goal encompasses our Scope 1, 2, and 3 GHG emissions.

**Do you intend to neutralize any unabated emissions with permanent carbon removals at the target year?**

Yes

**Planned milestones and/or near-term investments for neutralization at target year**

PG&E has committed to set near-term company-wide emission reductions in line with climate science with the SBTi. To track progress, we will continue our rigorous effort to complete a comprehensive, verified greenhouse gas emissions inventory each year across our Scope 1, 2, and 3 emissions.

Achieving a climate positive energy system by 2050 will build upon our 2030 and 2040 climate goals and will have significant implications for PG&E's energy delivery system over the coming decades. As the operator of a dual-commodity energy system, PG&E is uniquely positioned to lead this transition and shape the future—all with a continued focus on helping our customers and hometowns prosper.

Our commitment to becoming “climate positive” by 2050 will take us further than net zero carbon emissions—and we're excited about the opportunities to co-create this future together with our many stakeholders.

To shape the future energy delivery system, PG&E's gas strategy focuses on a diversity of win-win options that will be needed to meet our climate goals—and those of California. Our vision is to evolve the gas system to be an affordable, safe, and reliable net zero energy delivery platform. While we are planning and investing for the system to evolve—to deliver cleaner fuels to meet gradually declining customer demand—over the coming decades, our gas system infrastructure will continue to play a vital role for our customers and the state as a storage, reliability, and resiliency resource.

To achieve this vision, we're focused on strategies that will reduce our carbon footprint, while also reducing costs, identifying alternative revenue sources, and leveraging innovative financial mechanisms.

With the electric system, we embrace the role we will play in enabling and scaling a decarbonized grid. Customers with EVs and electric heating and cooling systems use about double the annual electricity of households without—driving unprecedented growth in electrification.

To enable this dramatic growth, our vision is to make the electric grid smarter, more dynamic, and more flexible—incorporating new energy technologies and giving our customers increased flexibility, choice, and value. We recognize the need to reimagine the grid to meet varying and evolving needs—from accelerating renewable energy integration and decarbonization to adapting our system to mitigate growing wildfire and other physical climate risks.

### **Planned actions to mitigate emissions beyond your value chain (optional)**

We're also renewing our focus on biodiversity through a long-term commitment to be “nature positive” as a company. This means going beyond avoiding impacts and having no net impact on the natural environment—instead, it requires investing in projects, environmental initiatives and research, and partnerships to restore biodiversity across ecosystems and habitats.

Importantly, we're committed to making this transition through specific initiatives—land, air, water, and habitat—that are cost-responsible and prioritize collaboration.

### C4.3

**(C4.3) Did you have emissions reduction initiatives that were active within the reporting year? Note that this can include those in the planning and/or implementation phases.**

Yes

### C4.3a

**(C4.3a) Identify the total number of initiatives at each stage of development, and for those in the implementation stages, the estimated CO2e savings.**

|                           | Number of initiatives | Total estimated annual CO2e savings in metric tonnes CO2e (only for rows marked *) |
|---------------------------|-----------------------|--|
| Under investigation       | 7                     | 0  |
| To be implemented*        | 23                    | 0  |
| Implementation commenced* | 21                    | 200,000  |
| Implemented*              | 28                    | 569,563  |
| Not to be implemented     | 1                     | 0  |

### C4.3b

**(C4.3b) Provide details on the initiatives implemented in the reporting year in the table below.**

**Initiative category & Initiative type**

Other, please specify

Other, please specify

Process emissions reductions; change in operations

**Estimated annual CO2e savings (metric tonnes CO2e)**

531,601

**Scope(s) or Scope 3 category(ies) where emissions savings occur**

Scope 1

**Voluntary/Mandatory**

Voluntary

**Annual monetary savings (unit currency – as specified in C0.4)**

3,000,000

**Investment required (unit currency – as specified in C0.4)**

5,000,000

**Payback period**

No payback

**Estimated lifetime of the initiative**

1-2 years

**Comment**

In 2021, PG&E reduced methane emissions, compared to the 2016 baseline of the Million Ton Challenge, by 531,601 metric tonnes CO<sub>2</sub>e (mtCO<sub>2</sub>e).

PG&E implemented drafting and cross compression strategies to reduce the amount of natural gas released to the atmosphere during construction and repair projects on our natural gas transmission system. Reducing these gas transmission system “blowdown” emissions prevented the release of approximately 801 MMscf, equaling approximately 359,980 mtCO<sub>2</sub>e from entering the atmosphere. This performance eclipsed the annual abatement goal (400 MMscf) established in PG&E’s Natural Gas Leak Abatement Compliance Plan filing with the CPUC. (Drafting and cross compression are strategies used to reduce and transfer the amount of natural gas from the part of the system needed to complete work to another part of our system.)

PG&E also continued implementing several additional strategies across natural gas pipelines and operations to reduce emissions including: 3–year leak survey cycle; Super-emitter survey and leak repair; replacing high bleed pneumatic controllers; and replacing mains and services. PG&E’s system wide process and fugitive methane emissions decreased about 171,621 mtCO<sub>2</sub>e compared to 2016 baseline levels. Gas network emissions decreases were driven by finding a greater number of leaks identified through distribution leak surveys.

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**Initiative category & Initiative type**

Fugitive emissions reductions

Other, please specify

Repair of leaking SF<sub>6</sub> equipment

**Estimated annual CO<sub>2</sub>e savings (metric tonnes CO<sub>2</sub>e)**

11,097

**Scope(s) or Scope 3 category(ies) where emissions savings occur**

Scope 1

**Voluntary/Mandatory**

Voluntary

**Annual monetary savings (unit currency – as specified in C0.4)**

0

**Investment required (unit currency – as specified in C0.4)**

450,000

**Payback period**

No payback

**Estimated lifetime of the initiative**

11-15 years

**Comment**

PG&E strives to reduce our Scope 1 sulfur hexafluoride (SF6) emissions by implementing SF6 tracking, early detection measures for circuit breakers, and an active breaker replacement program. In 2021, PG&E repaired or replaced nearly 40 targeted circuit breakers to reduce emissions. The average annual expense for this type of work is \$450,000, based on a 9-year period. PG&E's proactive efforts resulted in a systemwide fugitive emissions decrease relative to the 2016 baseline year of 11,097 MT CO<sub>2</sub>e.

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**Initiative category & Initiative type**

Energy efficiency in buildings

Other, please specify

Building Energy Efficiency Upgrades and Solar Generation

**Estimated annual CO<sub>2</sub>e savings (metric tonnes CO<sub>2</sub>e)**

8,066

**Scope(s) or Scope 3 category(ies) where emissions savings occur**

Scope 2 (market-based)

**Voluntary/Mandatory**

Voluntary

**Annual monetary savings (unit currency – as specified in C0.4)**

750,000

**Investment required (unit currency – as specified in C0.4)**

0

**Payback period**

4-10 years

**Estimated lifetime of the initiative**

6-10 years

**Comment**

As part of the Million Ton Challenge, a five-year carbon reduction goal for our operations, we are working to improve the sustainability performance of our facilities. PG&E utilized seven on-site solar PV installations at our facilities for 2021, along with

reductions in building natural gas, resulting in savings of approximately 8,066 MT CO<sub>2</sub>e. Additional PV solar projects are in the planning stage. During the year, PG&E also continued to engage coworkers around energy-saving actions.

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**Initiative category & Initiative type**

Other, please specify  
Other, please specify  
Environmental Remediation Sites

**Estimated annual CO<sub>2</sub>e savings (metric tonnes CO<sub>2</sub>e)**

1,200

**Scope(s) or Scope 3 category(ies) where emissions savings occur**

Scope 3 category 3: Fuel-and-energy-related activities (not included in Scopes 1 or 2)  
Scope 3 category 5: Waste generated in operations

**Voluntary/Mandatory**

Voluntary

**Annual monetary savings (unit currency – as specified in C0.4)**

0

**Investment required (unit currency – as specified in C0.4)**

0

**Payback period**

No payback

**Estimated lifetime of the initiative**

1-2 years

**Comment**

PG&E reduced our emissions in 2021 across various environmental remediation sites. PG&E achieved these results by incorporating sustainable practices on our remediation sites: using heavy construction and remediation equipment meeting Tier 3 and Tier 4 federal emission standards, reflecting the cleanest standards in the industry; using alternative fuels and renewable sources of energy for equipment and vehicles; and maximizing recycling, on-site reuse of materials and reductions in liquid and soil wastes generated during remediation.

We also added \$7 million to the local economies near our project sites by sourcing our equipment and vendors from the local community, an effort we make whenever possible on our remediation projects.

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**Initiative category & Initiative type**

Transportation

Company fleet vehicle replacement

**Estimated annual CO<sub>2</sub>e savings (metric tonnes CO<sub>2</sub>e)**

18,799

**Scope(s) or Scope 3 category(ies) where emissions savings occur**

Scope 1

**Voluntary/Mandatory**

Voluntary

**Annual monetary savings (unit currency – as specified in C0.4)**

0

**Investment required (unit currency – as specified in C0.4)**

0

**Payback period**

No payback

**Estimated lifetime of the initiative**

6-10 years

**Comment**

As part of our commitment to reduce our operational footprint, we continue to incorporate innovative new vehicles into our fleet. PG&E managed approximately 13,900 on-road vehicles and related equipment in our fleet at the end of 2021. Of those, about 1,200 were electric-based and more than 50 were powered by CNG. No incremental investments in EVs were recorded in the reporting year.

Our network of electric charging stations is also growing; last year we surpassed 1,338 charge points at 118 locations across our service area. We also maintain a network of 32 CNG vehicle refueling facilities, 22 of which are open to customers. PG&E uses petroleum and renewable diesel to power many of the vehicles in our fleet. Through our network of CNG vehicle refueling facilities open to customers, we refueled about 1,500 vehicles and fleets with about 900,000 gallons of gasoline equivalents in 2021. In 2019, PG&E began a three-year pilot to procure RNG for our CNG vehicle customers.

PG&E also rolled out renewable diesel to more than 60 sites, using over 3.3 million gallons of renewable diesel in our conventional vehicles and reducing associated carbon emissions. PG&E accrues emission reductions through the life of the vehicles; the average life of PG&E's light- and heavy-duty vehicles is 8 to 10 years. Emission reductions are calculated as part of the Million Ton Challenge (2021 performance compared to the 2016 baseline).

## C4.3c

**(C4.3c) What methods do you use to drive investment in emissions reduction activities?**

| Method   | Comment   |
|--|---|
| <p>Compliance with regulatory requirements/standards</p> | <p>PG&amp;E’s operations are subject to extensive federal, state, and local environmental laws and regulations. These requirements relate to a broad range of activities, including preventing the discharge of pollutants; safely transporting, handling, and storing hazardous materials; properly managing hazardous wastes; protecting threatened and endangered species; and reporting and reducing emissions of air pollutants and greenhouse gases such as carbon dioxide, methane, and sulfur hexafluoride.</p> <p>To meet these requirements, PG&amp;E employs an Environmental Management System (EMS) modeled after the ISO 14001 environmental management standard and consistent with the ISO standard’s “Plan, Do, Check, Act” model for continuous improvement. In addition, we align our EMS and environmental operations to PG&amp;E’s Compliance and Ethics Maturity Model, which helps to integrate our compliance activities across the enterprise.</p> <p>PG&amp;E supports California’s implementation of SB 100 and carbon neutrality by 2045 in a reliable and cost-effective manner for customers. SB 100 includes increased RPS objectives and clean energy goals, and Executive Order B-55-18 sets a statewide goal to achieve carbon neutrality no later than 2045. We are participating actively in legislative efforts to codify the carbon neutrality goal and in proceedings at the CPUC, CEC, and the CARB to determine how to achieve carbon neutrality.</p> <p>We are committed to exceeding federal and state vehicle emissions and alternative fuel requirements. We comply with federal regulations which require that 90% of all light-duty vehicles purchased for our fleet are capable of using an alternative fuel—such as electricity or compressed natural gas—provided that the technology is commercially available. To comply with California’s on-road diesel vehicle regulations, all of PG&amp;E’s medium- and heavy-duty diesel vehicles met or exceeded 2007 standards for particulate levels by the end of 2016, and all vehicles in our fleet met 2010 standards for nitrogen oxide emissions by the end of 2018, five years ahead of the 2023 CARB regulatory requirement.</p> |
| <p>Dedicated budget for energy efficiency</p>            | <p>In 2021, PG&amp;E spent \$201 million on energy efficiency projects—a significant investment in energy efficiency by a U.S. utility. In 2021, the estimated electric savings totaled 1,846 GWh and total natural gas savings came to 43.3 million therms. These results avoided the emission of more than 700,000 metric tons of CO<sub>2</sub>.</p>   |

|   |   |
|---|---|
| Employee engagement                               | PG&E has a dedicated campaign to engage its employees to contribute towards the Million Ton Challenge.  |
| Other   | PG&E integrates emission reduction activities into business plans and operating budgets to reduce our Scope 1 SF6 emissions.  |
| Other   | PG&E integrates emission reduction activities into business plans and operating budgets to reduce our Scope 1 methane emissions from our natural gas transmission and distribution system.  |
| Other   | PG&E integrates activities into business plans and operating budgets to improve our fleet's efficiency and to incorporate low-emissions vehicles into our fleet.  |
| Other   | PG&E integrates emission reduction activities into business plans and operating budgets to improve our facility sustainability performance.   |
| Other   | PG&E conducts policy advocacy to drive investment in emissions reduction activities. For example, at the federal level, PG&E advocates to expand and enhance the current federal tax credit for electric vehicles; provide grants, tax credits, and other incentives and policy changes to encourage the expansion of charging infrastructure; incentives to support electrification of fleet vehicles; and uphold California's ability to set its own vehicle emissions standards under the Clean Air Act.   |
| Compliance with regulatory requirements/standards | <p>In 2017, California took an important step to address air pollution in the most environmentally burdened communities through the passage of AB 617, which directs CARB to develop a community air monitoring and community emissions reduction program and to deploy them in the highest priority communities.</p> <p>California's goals are to achieve 100% sales of light-duty ZEVs by 2035, 100% medium- and heavy- duty ZEVs in operation by 2045, and 100% off-road ZEVs and equipment in operation by 2035 as laid out in Executive Order N-79-20.</p> <p>The state set a goal for 250,000 charging stations by 2025, including 10,000 fast chargers and 200 hydrogen fueling stations. The CEC projected a need for up to 1.2 million charging stations by 2030 to meet the state's 2035 goals. As of 2021, California had over 78,000 chargers across the state, including more than 7,000 fast chargers, according to the California Energy Commission.</p> <p>PG&amp;E strongly supports a comprehensive, statewide air protection program and was actively engaged in the development and passage of AB 617. PG&amp;E is working with CARB and other stakeholders through the AB 617 implementation process to ensure that the community air-protection programs are successful and effective at reducing emissions in disadvantaged communities.</p> |

|  |  |
|--|--|
|  | <p>PG&amp;E additionally restores and protects environmental habitats to fulfill state and federal regulatory requirements and to support voluntary environmental initiatives. In 2021, our efforts protected, created, or restored 722 acres of habitat, and managed over 3,800 acres of existing restoration or conservation projects.</p>   |
| <p>Partnering with governments on technology development</p> | <p>Since 2019, PG&amp;E has funded the Fuels Reduction Partnership Program, a voluntary program with the U.S. Forest Service (USFS) that is the first of its kind in California. In 2021, we treated more than 6,700 acres and awarded more than \$4.3 million for five national forests in our service area.</p> <p>The program funds forest fire mitigating activities within USFS lands and outside of our right-of-ways and helps increase the pace and scale of forest fuels reduction and ecological restoration. Through prescribed burns, biomass and wood debris removal, and other activities, the program protects communities and PG&amp;E infrastructure from wildfires, while helping the USFS achieve their fuel reduction goals.</p> |

## C4.5

**(C4.5) Do you classify any of your existing goods and/or services as low-carbon products?**

Yes

## C4.5a

**(C4.5a) Provide details of your products and/or services that you classify as low-carbon products.**

### Level of aggregation

Product or service

### Taxonomy used to classify product(s) or service(s) as low-carbon

Other, please specify

California Renewable Portfolio Standard

### Type of product(s) or service(s)

Power

Other, please specify

Electricity Supplied to Customers

### Description of product(s) or service(s)

PG&E offers customers some of the nation's cleanest energy. In 2021, more than 90% of the electricity we supplied to customers was greenhouse-gas free and about 50% came from renewable sources, including solar, wind, geothermal, small hydroelectric, and various forms of bioenergy. We are well on our way toward meeting our voluntary goal of 70% RPS electricity by 2030.

**Have you estimated the avoided emissions of this low-carbon product(s) or service(s)**

No

**Methodology used to calculate avoided emissions**

**Life cycle stage(s) covered for the low-carbon product(s) or services(s)**

**Functional unit used**

**Reference product/service or baseline scenario used**

**Life cycle stage(s) covered for the reference product/service or baseline scenario**

**Estimated avoided emissions (metric tons CO<sub>2</sub>e per functional unit) compared to reference product/service or baseline scenario**

**Explain your calculation of avoided emissions, including any assumptions**

**Revenue generated from low-carbon product(s) or service(s) as % of total revenue in the reporting year**

60

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**Level of aggregation**

Group of products or services

**Taxonomy used to classify product(s) or service(s) as low-carbon**

Other, please specify

Green-e Energy certification

**Type of product(s) or service(s)**

Power

Solar PV

**Description of product(s) or service(s)**

PG&E's Solar Choice program allows customers to purchase up to 100% of their power from locally sourced solar energy. PG&E's Regional Renewable Choice program enables customers to purchase renewable energy from a specific renewable project of their choice within PG&E's service area. Customers may contract with developers and subscribe to a portion of the power produced from a newly developed renewable project based in PG&E's service area. Customers can subscribe to between 25% and 100% of their energy use. Through the program, PG&E works with local renewable energy developers across Northern and Central California that will build small- and mid-sized renewable projects ranging from 0.5 to 20 MW. The energy for these new projects must be from renewable resources including, but not limited to, solar, wind or biomass.

In 2020, we launched the Green Saver program, our first community renewables program enabling customers in disadvantaged communities to subscribe to 100% solar energy from solar projects built within California. The program remained fully subscribed in 2021. We approved contracts for 6 MW of additional solar capacity in 2021, an increase from 4.65 MW in 2020. We also approved contracts for 3 MW of additional solar supply for customers participating in the Local Green Saver Program, another community renewable program targeting customers in disadvantaged communities through which participants will eventually enroll in specific solar projects that come online.

**Have you estimated the avoided emissions of this low-carbon product(s) or service(s)**

No

**Methodology used to calculate avoided emissions**

**Life cycle stage(s) covered for the low-carbon product(s) or services(s)**

**Functional unit used**

**Reference product/service or baseline scenario used**

**Life cycle stage(s) covered for the reference product/service or baseline scenario**

**Estimated avoided emissions (metric tons CO<sub>2</sub>e per functional unit) compared to reference product/service or baseline scenario**

**Explain your calculation of avoided emissions, including any assumptions**

**Revenue generated from low-carbon product(s) or service(s) as % of total revenue in the reporting year**

1

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**Level of aggregation**

Group of products or services

**Taxonomy used to classify product(s) or service(s) as low-carbon**

Other, please specify

CPUC-approved Energy Efficiency Program

**Type of product(s) or service(s)**

Other

Other, please specify

Energy efficiency training and education

**Description of product(s) or service(s)**

PG&E delivers energy efficiency solutions for millions of residential, commercial, agricultural, and other customers. PG&E reaches customers using a variety of channels, from self-service software tools to PG&E's business customer account representatives. PG&E partners with state and local governments, community partners, and third-party energy efficiency specialists. Three training centers offer energy efficiency education and training programs for building professionals, including architects, designers, engineers, contractors, and technicians.

Our energy efficiency priorities include: (1) Working to reduce financial barriers to installing energy efficient equipment for residential, commercial, and government customers; (2) Giving customers access to their data in coordination with tips, tools, and programs to support smart energy planning and reduce their energy use; (3) Collaborating with retailers, distributors, and others to increase the availability of high-efficiency products; (4) Supporting California's decarbonization goals by advocating for building codes and appliance standards that offer feasible, cost-effective pathways to designing all-electric buildings and by developing statewide all-electric residential and non-residential new construction programs; and (5) Providing technical support for local governments that choose to exceed minimum requirements for state building codes.

**Have you estimated the avoided emissions of this low-carbon product(s) or service(s)**

No

**Methodology used to calculate avoided emissions**

**Life cycle stage(s) covered for the low-carbon product(s) or services(s)**

**Functional unit used**

**Reference product/service or baseline scenario used**

**Life cycle stage(s) covered for the reference product/service or baseline scenario**

**Estimated avoided emissions (metric tons CO<sub>2</sub>e per functional unit) compared to reference product/service or baseline scenario**

**Explain your calculation of avoided emissions, including any assumptions**

**Revenue generated from low-carbon product(s) or service(s) as % of total revenue in the reporting year**

1

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**Level of aggregation**

Group of products or services

**Taxonomy used to classify product(s) or service(s) as low-carbon**

Other, please specify

CPUC-approved Demand Response program

**Type of product(s) or service(s)**

Systems integration

Smart meter

**Description of product(s) or service(s)**

PG&E's demand response options are supported by SmartMeter™ technology, which helps customers better understand their energy usage and lower their energy costs. Approximately 135,000 residential customers participate in the programs we offer, along with more than 110,000 larger commercial and industrial customers. Demand response programs include SmartRate, SmartAC, Peak Day Pricing, Capacity Bidding Program, Base Interruptible Program, and AutoDR.

In 2021, we launched four new demand response pilots in response to the historic heat storm that impacted the Western U.S. for several consecutive days in 2020. These include: 1) Emergency Load Reduction Pilot, a five-year pilot which provides financial incentives to eligible participants who voluntarily provide energy reductions during times of potential or actual stress on the CAISO transmission system; 2) Power Saver Rewards, a two-year pilot that tests how the combination of residential smart technologies, behavioral messaging, and time-of-use rates can reduce demand; 3) California State Emergency Program, a limited three-month pilot that provided financial

incentives to eligible participants who voluntarily provided energy reductions during grid emergencies; and, 4) Demand Response Agricultural Study, a one-year pilot that tested ways to grow demand response participation and load reduction among businesses in the agricultural sector.

**Have you estimated the avoided emissions of this low-carbon product(s) or service(s)**

No

**Methodology used to calculate avoided emissions**

**Life cycle stage(s) covered for the low-carbon product(s) or services(s)**

**Functional unit used**

**Reference product/service or baseline scenario used**

**Life cycle stage(s) covered for the reference product/service or baseline scenario**

**Estimated avoided emissions (metric tons CO<sub>2</sub>e per functional unit) compared to reference product/service or baseline scenario**

**Explain your calculation of avoided emissions, including any assumptions**

**Revenue generated from low-carbon product(s) or service(s) as % of total revenue in the reporting year**

1

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**Level of aggregation**

Group of products or services

**Taxonomy used to classify product(s) or service(s) as low-carbon**

Other, please specify

CPUC-approved EV Charge Network Program, Fast Charge Program, and FleetReady Program

**Type of product(s) or service(s)**

Other

Other, please specify

EV charging stations

**Description of product(s) or service(s)**

In 2021, PG&E successfully installed 4,827 Level 2 ports at workplaces and multi-family dwellings, with 39% of the units located in disadvantaged communities, PG&E also completed construction on 30 sites for the EV Fleet program and 5 sites for the EV Fast Charge Program; 14 sites for the EV Fleet program; and the first site in the EV Fast Charge Program. There were more than 330,000 EVs in PG&E's service area at the end of 2021. PG&E proposed EV Charge 2, a \$276 million program that builds on PG&E's EV Charge Network and EV Fast Charge programs by supporting infrastructure installation for 16,000 additional Level 2 and DC Fast Charging ports. The program aims to support multi-family housing residents with onsite, workplace, and public destination charging options.

**Have you estimated the avoided emissions of this low-carbon product(s) or service(s)**

No

**Methodology used to calculate avoided emissions**

**Life cycle stage(s) covered for the low-carbon product(s) or services(s)**

**Functional unit used**

**Reference product/service or baseline scenario used**

**Life cycle stage(s) covered for the reference product/service or baseline scenario**

**Estimated avoided emissions (metric tons CO<sub>2</sub>e per functional unit) compared to reference product/service or baseline scenario**

**Explain your calculation of avoided emissions, including any assumptions**

**Revenue generated from low-carbon product(s) or service(s) as % of total revenue in the reporting year**

1

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**Level of aggregation**

Group of products or services

**Taxonomy used to classify product(s) or service(s) as low-carbon**

Other, please specify

CPUC-approved incentive programs for low-income solar, solar thermal water heating, fuel cells, wind, battery storage and other advanced technologies

**Type of product(s) or service(s)**

Power

Other, please specify

Solar electricity and water heating incentive programs

**Description of product(s) or service(s)**

Through our Self-Generation Incentive Program, we completed over 4,900 interconnections by the end of 2021 and paid for over 6,200 projects, resulting in over \$71 million in total payments. This included over 2,100 equity resiliency projects funded at \$54 million.

Additionally, there were more than 33,000 PG&E customers with battery storage in their homes or businesses, representing 362 MW of installed capacity – newly installed customer storage capacity increased by nearly 40% compared to 2020.

In 2021, we reached 608,000 interconnected solar systems, totaling more than 6,000 MW. In addition, we provided approximately \$163 million in statewide incentive payments to single family residential, multi-family residential, and commercial solar water heating installations. These incentives have helped support about 12,350 gas-offsetting projects since the program's inception, which, in total, have reduced annual consumption of gas and electricity in excess of 9.5 million therms and 755 MWh.

**Have you estimated the avoided emissions of this low-carbon product(s) or service(s)**

No

**Methodology used to calculate avoided emissions**

**Life cycle stage(s) covered for the low-carbon product(s) or services(s)**

**Functional unit used**

**Reference product/service or baseline scenario used**

**Life cycle stage(s) covered for the reference product/service or baseline scenario**

**Estimated avoided emissions (metric tons CO<sub>2</sub>e per functional unit) compared to reference product/service or baseline scenario**

## **Explain your calculation of avoided emissions, including any assumptions**

### **Revenue generated from low-carbon product(s) or service(s) as % of total revenue in the reporting year**

1

## **C-EU4.6**

### **(C-EU4.6) Describe your organization's efforts to reduce methane emissions from your activities.**

PG&E's efforts to reduce methane emissions from our natural gas transmission and distribution operations include methane reduction targets, methane reduction projects, and collaborative initiatives to develop new methods and technologies and to reduce methane emissions through both mandatory and voluntary programs.

In 2021, PG&E reduced methane emissions by 531,601 metric tonnes CO<sub>2</sub>e (mtCO<sub>2</sub>e), compared to the 2016 baseline of the Million Ton Challenge (as described in C4.1a). To do so, we reduced methane emissions from our operations through leak detection and repair, pipeline replacement, and reducing transmission pipeline blowdowns. Many of the innovative techniques were also implemented to meet regulations from the CPUC and CARB. We piloted a variety of technologies, including drones, to detect leaks in areas that are difficult to reach on foot. We also continued our vintage pipe replacement program. We implemented drafting, cross compression, flaring and project bundling—separately and in combination—to reduce as much as possible the amount of natural gas released to the atmosphere during construction and repair projects on our gas transmission system.

Beyond implementing emission reduction strategies, part of the challenge is arriving at methods to measure these reductions. We're testing a new generation of methane detectors, which will be commercialized by RKI instruments. In addition to its high sensitivity, the instrument can identify the source of methane by measuring concentration levels and provides full traceability of leak surveys by collecting high accuracy GPS locations along with methane indications.

We also partnered with NYSEARCH, a research consortium, to develop a framework to characterize emissions at transmission metering and regulating stations, helping to better quantify, report, and reduce these emissions.

PG&E's gas leak abatement program includes annual methane emission tracking reporting and a biennial best practice compliance plan submission. PG&E is working to reduce methane emissions by 20% by 2025 and achieve our voluntary goal of 45% by 2030, relative to a 2015 baseline.

## C5. Emissions methodology

### C5.1

**(C5.1) Is this your first year of reporting emissions data to CDP?**

No

### C5.1a

**(C5.1a) Has your organization undergone any structural changes in the reporting year, or are any previous structural changes being accounted for in this disclosure of emissions data?**

Row 1

**Has there been a structural change?**

No

### C5.1b

**(C5.1b) Has your emissions accounting methodology, boundary, and/or reporting year definition changed in the reporting year?**

| Change(s) in methodology, boundary, and/or reporting year definition? |    |
|---|----|
| Row 1   | No |

### C5.2

**(C5.2) Provide your base year and base year emissions.**

Scope 1

**Base year start**

January 1, 2015

**Base year end**

December 31, 2015

**Base year emissions (metric tons CO<sub>2</sub>e)**

5,040,456

**Comment**

Scope 2 (location-based)

**Base year start**

January 1, 2015

**Base year end**

December 31, 2015

**Base year emissions (metric tons CO<sub>2</sub>e)**

1,592,049

**Comment**

**Scope 2 (market-based)**

---

**Base year start**

January 1, 2015

**Base year end**

December 31, 2015

**Base year emissions (metric tons CO<sub>2</sub>e)**

996,170

**Comment**

**Scope 3 category 1: Purchased goods and services**

---

**Base year start**

January 1, 2015

**Base year end**

December 31, 2015

**Base year emissions (metric tons CO<sub>2</sub>e)**

2,753,723

**Comment**

Reporting year emissions and base year emissions are equal as PG&E has not completed a follow-up assessment of this emissions source. We performed a GHG hotspot assessment of our non-energy related purchased goods and services. Construction services, vegetation management, and manufacturing industries represent over 60% of these Scope 3 upstream emissions.

**Scope 3 category 2: Capital goods**

---

**Base year start**

January 1, 2015

**Base year end**

December 31, 2015

**Base year emissions (metric tons CO<sub>2</sub>e)**

0

**Comment**

We do not have a baseline year estimated value for Category 2.

**Scope 3 category 3: Fuel-and-energy-related activities (not included in Scope 1 or 2)**

---

**Base year start**

January 1, 2015

**Base year end**

December 31, 2015

**Base year emissions (metric tons CO<sub>2</sub>e)**

11,926,307

**Comment**

**Scope 3 category 4: Upstream transportation and distribution**

---

**Base year start**

**Base year end**

**Base year emissions (metric tons CO<sub>2</sub>e)**

**Comment**

N/A -- PG&E does not track this emissions source.

**Scope 3 category 5: Waste generated in operations**

---

**Base year start**

January 1, 2015

**Base year end**

December 31, 2015

**Base year emissions (metric tons CO<sub>2</sub>e)**

1,741

**Comment**

**Scope 3 category 6: Business travel**

---

**Base year start**

January 1, 2015

**Base year end**

December 31, 2015

**Base year emissions (metric tons CO2e)**

2,532

**Comment**

**Scope 3 category 7: Employee commuting**

---

**Base year start**

January 1, 2015

**Base year end**

December 31, 2015

**Base year emissions (metric tons CO2e)**

2,016

**Comment**

**Scope 3 category 8: Upstream leased assets**

---

**Base year start**

**Base year end**

**Base year emissions (metric tons CO2e)**

**Comment**

N/A -- PG&E does not track this emissions source.

**Scope 3 category 9: Downstream transportation and distribution**

---

**Base year start**

**Base year end**

**Base year emissions (metric tons CO2e)**

**Comment**

N/A -- PG&E does not track this emissions source.

**Scope 3 category 10: Processing of sold products**

---

**Base year start**

**Base year end**

**Base year emissions (metric tons CO2e)**

**Comment**

N/A -- PG&E does not track this emissions source.

**Scope 3 category 11: Use of sold products**

---

**Base year start**

January 1, 2015

**Base year end**

December 31, 2015

**Base year emissions (metric tons CO2e)**

36,568,642

**Comment**

**Scope 3 category 12: End of life treatment of sold products**

---

**Base year start**

**Base year end**

**Base year emissions (metric tons CO2e)**

**Comment**

N/A -- PG&E does not track this emissions source.

**Scope 3 category 13: Downstream leased assets**

---

**Base year start**

**Base year end**

**Base year emissions (metric tons CO2e)**

**Comment**

N/A -- PG&E does not track this emissions source.

### **Scope 3 category 14: Franchises**

---

**Base year start**

**Base year end**

**Base year emissions (metric tons CO<sub>2</sub>e)**

**Comment**

N/A -- PG&E does not track this emissions source.

### **Scope 3 category 15: Investments**

---

**Base year start**

**Base year end**

**Base year emissions (metric tons CO<sub>2</sub>e)**

**Comment**

N/A -- PG&E does not track this emissions source.

### **Scope 3: Other (upstream)**

---

**Base year start**

**Base year end**

**Base year emissions (metric tons CO<sub>2</sub>e)**

**Comment**

N/A -- PG&E does not track this emissions source.

### **Scope 3: Other (downstream)**

---

**Base year start**

**Base year end**

### Base year emissions (metric tons CO<sub>2</sub>e)

#### Comment

N/A -- PG&E does not track this emissions source.

## C5.3

### (C5.3) Select the name of the standard, protocol, or methodology you have used to collect activity data and calculate emissions.

The Climate Registry: Electric Power Sector (EPS) Protocol

The Climate Registry: General Reporting Protocol

The Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard (Revised Edition)

Other, please specify

California Energy Commission Power Source Disclosure; California Air Resources Board and U.S. EPA GHG protocols for mandatory emissions reporting

## C6. Emissions data

### C6.1

#### (C6.1) What were your organization's gross global Scope 1 emissions in metric tons CO<sub>2</sub>e?

##### Reporting year

---

##### Gross global Scope 1 emissions (metric tons CO<sub>2</sub>e)

4,458,777

##### Comment

### C6.2

#### (C6.2) Describe your organization's approach to reporting Scope 2 emissions.

##### Row 1

---

##### Scope 2, location-based

We are reporting a Scope 2, location-based figure

##### Scope 2, market-based

We are reporting a Scope 2, market-based figure

##### Comment

## C6.3

**(C6.3) What were your organization's gross global Scope 2 emissions in metric tons CO<sub>2</sub>e?**

### Reporting year

---

**Scope 2, location-based**

833,649

**Scope 2, market-based (if applicable)**

162,529

**Comment**

PG&E calculates Scope 2 emissions as the portion of our electricity use attributed to purchased electricity. We use an adjustment of our own emission rate (98.47 pounds CO<sub>2</sub>/MWh in 2021), which is still undergoing third-party verification. Beginning with our 2019 emissions reporting, PG&E used the California Energy Commission's Power Source Disclosure program methodology to calculate this rate; this methodology differed from prior years and may result in lower emission rates.

## C6.4

**(C6.4) Are there any sources (e.g. facilities, specific GHGs, activities, geographies, etc.) of Scope 1 and Scope 2 emissions that are within your selected reporting boundary which are not included in your disclosure?**

No

## C6.5

**(C6.5) Account for your organization's gross global Scope 3 emissions, disclosing and explaining any exclusions.**

### Purchased goods and services

---

**Evaluation status**

Relevant, calculated

**Emissions in reporting year (metric tons CO<sub>2</sub>e)**

2,753,723

**Emissions calculation methodology**

Spend-based method

**Percentage of emissions calculated using data obtained from suppliers or value chain partners**

0

**Please explain**

In collaboration with the Electric Utility Industry Sustainable Supply Chain Alliance and Anthesis, PG&E mapped its 2019 spend with over 4,300 vendors to 39 product categories and used economic input-output tables and industry-level environmental data to construct a top-down database of environmental impact per dollar of sales. This mapping exercise helped PG&E quantify greenhouse gas emissions associated with goods and services procured in our supply chain. The analysis revealed that a significant portion of our supply chain emissions occur in construction services, vegetation management, and manufacturing industries.

## Capital goods

---

### Evaluation status

Not relevant, explanation provided

### Please explain

As a supplier of electricity and natural gas, PG&E's capital goods consist primarily of energy infrastructure and purchased electricity and natural gas. The emissions associated with our energy production and natural gas transmission and distribution are accounted for in our Scope 1 and 2 emissions, and there are no other material emissions from our capital goods.

## Fuel-and-energy-related activities (not included in Scope 1 or 2)

---

### Evaluation status

Relevant, calculated

### Emissions in reporting year (metric tons CO<sub>2</sub>e)

780,391

### Emissions calculation methodology

Fuel-based method

### Percentage of emissions calculated using data obtained from suppliers or value chain partners

100

### Please explain

These emissions are reported to The Climate Registry in accordance with the Electric Power Sector (EPS) protocol. For energy deliveries, PG&E refers to the Power Source Disclosure Report (PSDR), a report that PG&E submits annually to the California Energy Commission (CEC). This report details the name, identification numbers, fuel types, net kWh purchased, and GHG emissions (MT CO<sub>2</sub>) for every power plant (renewable and non-renewable) from which PG&E purchases electricity.

Beginning with our 2019 emissions reporting, PG&E used the CEC's Power Source Disclosure program methodology to calculate emissions associated with purchased power. The PSDR requires that any procurement (owned generation or purchases) in excess of retail sales (e.g., an oversupply of power) be subtracted from retail sales using a cascading formula. The prescribed CEC formula requires that all fossil fuel

procurements be subtracted first and, if additional volumes are still required, then all other specified purchases are proportionality reduced until total procurement equals total retail sales. Due to this adjustment, some anthropogenic CO<sub>2</sub> emissions were removed from PG&E's retail electricity supply mix. This methodology differed from pre-2019 years and may result in lower emission rates.

## Upstream transportation and distribution

---

### Evaluation status

Not relevant, explanation provided

### Please explain

PG&E's supply chain primarily consists of upstream purchased electricity and natural gas. Energy use and losses in transporting electricity and natural gas is accounted for in our Scope 1 and Scope 2 emissions, and there are no other material transportation and distribution emissions upstream.

## Waste generated in operations

---

### Evaluation status

Not relevant, calculated

### Emissions in reporting year (metric tons CO<sub>2</sub>e)

1,502

### Emissions calculation methodology

Waste-type-specific method

### Percentage of emissions calculated using data obtained from suppliers or value chain partners

20

### Please explain

PG&E measures volumes and weights of waste generated at all facilities and inputs this data to the U.S. EPA WARM Model Lifecycle GHG comparison. PG&E uses industry standard volume-to-weight conversions to generate tonnages for each weight type in instances where haulers do not provide primary weight data.

## Business travel

---

### Evaluation status

Relevant, calculated

### Emissions in reporting year (metric tons CO<sub>2</sub>e)

728

### Emissions calculation methodology

Spend-based method

**Percentage of emissions calculated using data obtained from suppliers or value chain partners**

0

**Please explain**

This figure represents the emissions associated with travel booked through the travel agencies that PG&E employs.

**Employee commuting**

---

**Evaluation status**

Relevant, calculated

**Emissions in reporting year (metric tons CO<sub>2</sub>e)**

2,016

**Emissions calculation methodology**

Distance-based method

**Percentage of emissions calculated using data obtained from suppliers or value chain partners**

0

**Please explain**

Employees were surveyed on miles traveled and mode of transport as part of PG&E's General Office LEED survey. Passenger miles traveled were input to the GHG Protocol Mobile Combustion GHG Emission Calculation Tool, v2.3 with custom emission factors for light rail from the U.S. Department of Transportation (0.3 pounds CO<sub>2</sub>/passenger mile traveled) and San Francisco BART (0.13 pounds CO<sub>2</sub>/passenger mile traveled).

**Upstream leased assets**

---

**Evaluation status**

Not relevant, explanation provided

**Please explain**

PG&E has entered into capital lease agreements to purchase energy and capacity with independent power producers that own generation facilities that meet the definition of Qualified Facilities under federal law. Emissions from these sources are included in PG&E's Scope 3 emissions for electricity delivered to customers, included above.

**Downstream transportation and distribution**

---

**Evaluation status**

Not relevant, explanation provided

**Please explain**

PG&E delivers electricity and natural gas directly to customers. There are no downstream operations to account for emissions in this category.

## Processing of sold products

---

### Evaluation status

Not relevant, explanation provided

### Please explain

PG&E delivers electricity and natural gas directly to customers. Any emissions from the processing of natural gas we deliver are included in Fuel-and-Energy-related activities above.

## Use of sold products

---

### Evaluation status

Relevant, calculated

### Emissions in reporting year (metric tons CO<sub>2</sub>e)

41,314,098

### Emissions calculation methodology

Fuel-based method

### Percentage of emissions calculated using data obtained from suppliers or value chain partners

0

### Please explain

PG&E reports these emissions to the California Air Resources Board (CARB) in accordance with the AB 32 Mandatory Reporting Regulation (MRR) and to The Climate Registry. Excludes natural gas used by generating stations to generate electricity delivered to customers (Scope 3 Electricity Purchased for Customers). This category includes CO<sub>2</sub>e from natural gas that is delivered to customers. The figure represents the emissions from the combustion of natural gas delivered to all entities on PG&E's distribution system, with the exception of gas delivered to other natural gas local distribution companies, as well as gas delivered to PG&E facilities such as power plants, compressor stations, and offices, the emissions of which are reported separately.

## End of life treatment of sold products

---

### Evaluation status

Not relevant, explanation provided

### Please explain

The use of electricity and natural gas does not have a significant source of emissions related to disposal of the products.

## Downstream leased assets

---

### Evaluation status

Not relevant, explanation provided

**Please explain**

PG&E did not have leased assets during the reporting year that are not captured in Scope 1.

**Franchises**

---

**Evaluation status**

Not relevant, explanation provided

**Please explain**

PG&E did not operate any franchises during the reporting year.

**Investments**

---

**Evaluation status**

Not relevant, explanation provided

**Please explain**

PG&E did not have significant emissions due to investments that are not captured in Scopes 1 and 2 or listed elsewhere on this table.

**Other (upstream)**

---

**Evaluation status**

Not relevant, explanation provided

**Please explain**

PG&E did not operate any upstream assets during the reporting year.

**Other (downstream)**

---

**Evaluation status**

Not relevant, explanation provided

**Please explain**

PG&E did not operate any downstream assets during the reporting year.

## C6.7

**(C6.7) Are carbon dioxide emissions from biogenic carbon relevant to your organization?**

No

## C6.10

**(C6.10) Describe your gross global combined Scope 1 and 2 emissions for the reporting year in metric tons CO<sub>2</sub>e per unit currency total revenue and provide any additional intensity metrics that are appropriate to your business operations.**

---

**Intensity figure**

0.00022

**Metric numerator (Gross global combined Scope 1 and 2 emissions, metric tons CO2e)**

4,621,306

**Metric denominator**

unit total revenue

**Metric denominator: Unit total**

20,642,000,000

**Scope 2 figure used**

Market-based

**% change from previous year**

15

**Direction of change**

Decreased

**Reason for change**

A 3% decrease in total Scope 1 and 2 emissions and 11% increase in total revenue compared to 2020.

## C7. Emissions breakdowns

### C7.1

**(C7.1) Does your organization break down its Scope 1 emissions by greenhouse gas type?**

Yes

### C7.1a

**(C7.1a) Break down your total gross global Scope 1 emissions by greenhouse gas type and provide the source of each used greenhouse warming potential (GWP).**

| Greenhouse gas | Scope 1 emissions (metric tons of CO2e) | GWP Reference                                 |
|----------------|---|---|
| CO2            | 2,879,931                               | IPCC Fifth Assessment Report (AR5 – 100 year) |
| CH4            | 1,538,411                               | IPCC Fifth Assessment Report (AR5 – 100 year) |
| N2O            | 1,645                                   | IPCC Fifth Assessment Report (AR5 – 100 year) |

|      |        |   |
|------|--------|---|
| HFCs | 465    | IPCC Fifth Assessment Report (AR5 – 100 year) |
| SF6  | 38,324 | IPCC Fifth Assessment Report (AR5 – 100 year) |

## C-EU7.1b

**(C-EU7.1b) Break down your total gross global Scope 1 emissions from electric utilities value chain activities by greenhouse gas type.**

|                                    | Gross Scope 1 CO2 emissions (metric tons CO2) | Gross Scope 1 methane emissions (metric tons CH4) | Gross Scope 1 SF6 emissions (metric tons SF6) | Total gross Scope 1 emissions (metric tons CO2e) | Comment  |
|------------------------------------|---|---|---|--|--|
| Fugitives                          | 616   | 50,460  | 1.63  | 795,639  | Total gross Scope 1 emissions (metric tons CO2e) includes 520 MT of HFCs.                    |
| Combustion (Electric utilities)    | 2,786,299                                     | 86  | 0   | 2,790,046  | Total gross Scope 1 emissions (metric tons CO2e) includes 1,376 MT of N2O.                   |
| Combustion (Gas utilities)         | 0   | 0   | 0   | 0  |  |
| Combustion (Other)                 | 89,754  | 1.11  | 0   | 90,053   | Combustion (mobile) Total gross Scope 1 emissions (metric tons CO2e) includes 267 MT of N2O. |
| Emissions not elsewhere classified | 2,637   | 4,397   | 0   | 125,760  | This represents process emissions related to PG&E's natural gas operations during 2021.      |

## C7.2

**(C7.2) Break down your total gross global Scope 1 emissions by country/region.**

| Country/Region           | Scope 1 emissions (metric tons CO2e) |
|--------------------------|--------------------------------------|
| United States of America | 4,458,777                            |

### C7.3

(C7.3) Indicate which gross global Scope 1 emissions breakdowns you are able to provide.

By activity

### C7.3c

(C7.3c) Break down your total gross global Scope 1 emissions by business activity.

| Activity   | Scope 1 emissions (metric tons CO2e) |
|--|--------------------------------------|
| Sulfur Hexafluoride (SF6) from Electrical Equipment                          | 38,324                               |
| Facility Natural Gas Use   | 6,777                                |
| Gas Compressor Stations  | 297,422                              |
| Owned Fossil Electric Generation   | 2,487,912                            |
| Process and Fugitive Emissions from Natural Gas System                       | 1,537,355                            |
| Fleet (transportation emissions)   | 90,054                               |
| Other Emissions (e.g., propane use, stationary equipment gas and diesel use) | 932                                  |

### C-CE7.4/C-CH7.4/C-CO7.4/C-EU7.4/C-MM7.4/C-OG7.4/C-ST7.4/C-TO7.4/C-TS7.4

(C-CE7.4/C-CH7.4/C-CO7.4/C-EU7.4/C-MM7.4/C-OG7.4/C-ST7.4/C-TO7.4/C-TS7.4) Break down your organization's total gross global Scope 1 emissions by sector production activity in metric tons CO2e.

|                             | Gross Scope 1 emissions, metric tons CO2e | Comment |
|-----------------------------|---|---------|
| Electric utility activities | 4,458,777                                 |         |

### C7.5

(C7.5) Break down your total gross global Scope 2 emissions by country/region.

| Country/Region                             | Scope 2, location-based (metric tons CO2e) | Scope 2, market-based (metric tons CO2e) |
|--|--|--|
| United States of America<br>D <sub>1</sub> | 833,649                                    | 162,529                                  |

<sup>1</sup>PG&E consumed approximately 269,207 MWh of electricity in 2021. Of this consumption, approximately 103,420 MWh was purchased; the remaining 165,787 MWh was generated by PG&E-owned facilities.

## C7.6

**(C7.6) Indicate which gross global Scope 2 emissions breakdowns you are able to provide.**

By activity

### C7.6c

**(C7.6c) Break down your total gross global Scope 2 emissions by business activity.**

| Activity                           | Scope 2, location-based (metric tons CO2e) | Scope 2, market-based (metric tons CO2e) |
|------------------------------------|--|--|
| T&D Line Losses                    | 770,699                                    | 150,241                                  |
| Facility Electricity Use           | 62,951                                     | 4,951                                    |
| Compressor Station Electricity Use | 37,439                                     | 7,315                                    |
| Electricity Use by Fleet           | 116  | 23                                       |

## C7.9

**(C7.9) How do your gross global emissions (Scope 1 and 2 combined) for the reporting year compare to those of the previous reporting year?**

Decreased

### C7.9a

**(C7.9a) Identify the reasons for any change in your gross global emissions (Scope 1 and 2 combined), and for each of them specify how your emissions compare to the previous year.**

|  | Change in emissions (metric tons CO2e) | Direction of change | Emissions value (percentage) | Please explain calculation   |
|--|--|---------------------|------------------------------|--|
| Change in renewable energy consumption | 70,403                                 | Decreased           | 1.5                          | PG&E's owned fossil generation decreased in 2021, resulting in increased amounts of renewable energy consumption and reduced emissions.<br><br>Total percentage change is calculated as [70,403 MT/4,755,251 MT (total |

|   |        |           |      |   |
|---|--------|-----------|------|---|
|   |        |           |      | Scope 1 and Scope 2 emissions from 2020) x 100 = 1.7%].   |
| Other emissions reduction activities    | 3,222  | Decreased | 0.07 | <p>Emission reductions activities include: reduced facility natural gas use: 1,209 MT CO<sub>2</sub>e.</p> <p>Total percentage change is calculated as [3,222 MT/4,755,251 MT (total Scope 1 and Scope 2 emissions from 2020) x 100 = 0.07%].</p>   |
| Divestment                              |        |           |      |   |
| Acquisitions                            |        |           |      |   |
| Mergers                                 |        |           |      |   |
| Change in output                        | 66,764 | Decreased | 1.4  | <p>Total Scope 1 and 2 emissions decreased due to change in output activities including: (1) Overall reduction in fugitive SF<sub>6</sub> emissions: 19,956 MT CO<sub>2</sub>-e, (2) increased process and fugitive emissions from compressor stations: 6,706 MT CO<sub>2</sub>-e, (3) reduced emissions from Other Scope 1 sources: 830 MT CO<sub>2</sub>-e, (4) decreased electricity T&amp;D line losses: 48,357 MT CO<sub>2</sub>-e, (5) decreased facility electricity emissions: 9,497 MT CO<sub>2</sub>-e, and (6) increased process and fugitive emissions: 5,170 MT CO<sub>2</sub>-e.</p> <p>Total percentage change is calculated as [66,764 MT/4,755,251 MT (total Scope 1 and Scope 2 emissions from 2020) x 100 = 1.4%].</p> |
| Change in methodology                   |        |           |      |   |
| Change in boundary                      |        |           |      |   |
| Change in physical operating conditions |        |           |      |   |
| Unidentified                            |        |           |      |   |
| Other                                   |        |           |      |   |

## C7.9b

**(C7.9b) Are your emissions performance calculations in C7.9 and C7.9a based on a location-based Scope 2 emissions figure or a market-based Scope 2 emissions figure?**

Market-based

## C8. Energy

### C8.1

**(C8.1) What percentage of your total operational spend in the reporting year was on energy?**

More than 10% but less than or equal to 15%

### C8.2

**(C8.2) Select which energy-related activities your organization has undertaken.**

|  | Indicate whether your organization undertook this energy-related activity in the reporting year |
|--|---|
| Consumption of fuel (excluding feedstocks)         | Yes   |
| Consumption of purchased or acquired electricity   | Yes   |
| Consumption of purchased or acquired heat          | No  |
| Consumption of purchased or acquired steam         | No  |
| Consumption of purchased or acquired cooling       | No  |
| Generation of electricity, heat, steam, or cooling | Yes   |

### C8.2a

**(C8.2a) Report your organization's energy consumption totals (excluding feedstocks) in MWh.**

|  | Heating value | MWh from renewable sources | MWh from non-renewable sources | Total (renewable and non-renewable) MWh |
|--|---------------|----------------------------|--------------------------------|---|
|  |               |                            |                                |   |

|   |                            |         |            |            |
|---|----------------------------|---------|------------|------------|
| Consumption of fuel (excluding feedstock)               | HHV (higher heating value) | 134,247 | 14,914,025 | 15,048,272 |
| Consumption of purchased or acquired electricity        |                            | 60,532  | 208,675    | 269,207    |
| Consumption of self-generated non-fuel renewable energy |                            | 0       |            | 0          |
| Total energy consumption                                |                            | 194,779 | 15,122,700 | 15,317,479 |

## C8.2b

**(C8.2b) Select the applications of your organization’s consumption of fuel.**

|   | Indicate whether your organization undertakes this fuel application |
|---|---|
| Consumption of fuel for the generation of electricity   | Yes   |
| Consumption of fuel for the generation of heat          | No  |
| Consumption of fuel for the generation of steam         | No  |
| Consumption of fuel for the generation of cooling       | No  |
| Consumption of fuel for co-generation or tri-generation | No  |

## C8.2c

**(C8.2c) State how much fuel in MWh your organization has consumed (excluding feedstocks) by fuel type.**

### Sustainable biomass

#### Heating value

Unable to confirm heating value

#### Total fuel MWh consumed by the organization

0

#### MWh fuel consumed for self-generation of electricity

0

#### MWh fuel consumed for self-generation of heat

0

**Comment**

**Other biomass**

---

**Heating value**

Unable to confirm heating value

**Total fuel MWh consumed by the organization**

0

**MWh fuel consumed for self-generation of electricity**

0

**MWh fuel consumed for self-generation of heat**

0

**Comment**

**Other renewable fuels (e.g. renewable hydrogen)**

---

**Heating value**

Unable to confirm heating value

**Total fuel MWh consumed by the organization**

0

**MWh fuel consumed for self-generation of electricity**

0

**MWh fuel consumed for self-generation of heat**

0

**Comment**

**Coal**

---

**Heating value**

Unable to confirm heating value

**Total fuel MWh consumed by the organization**

0

**MWh fuel consumed for self-generation of electricity**

0

**MWh fuel consumed for self-generation of heat**

0

**Comment**

**Oil**

---

**Heating value**

HHV

**Total fuel MWh consumed by the organization**

154,700

**MWh fuel consumed for self-generation of electricity**

0

**MWh fuel consumed for self-generation of heat**

0

**Comment**

**Gas**

---

**Heating value**

HHV

**Total fuel MWh consumed by the organization**

14,705,289

**MWh fuel consumed for self-generation of electricity**

0

**MWh fuel consumed for self-generation of heat**

0

**Comment**

**Other non-renewable fuels (e.g. non-renewable hydrogen)**

---

**Heating value**

Unable to confirm heating value

**Total fuel MWh consumed by the organization**

0

**MWh fuel consumed for self-generation of electricity**

0

**MWh fuel consumed for self-generation of heat**

0

**Comment**

**Total fuel**

---

**Heating value**

HHV

**Total fuel MWh consumed by the organization**

15,201,023

**MWh fuel consumed for self-generation of electricity**

0

**MWh fuel consumed for self-generation of heat**

0

**Comment**

**C8.2d**

(C8.2d) Provide details on the electricity, heat, steam, and cooling your organization has generated and consumed in the reporting year.

|             | Total Gross generation (MWh) | Generation that is consumed by the organization (MWh) | Gross generation from renewable sources (MWh) | Generation from renewable sources that is consumed by the organization (MWh) |
|-------------|------------------------------|---|---|--|
| Electricity | 16,610,340                   | 165,787   | 604,598                                       | 13,036   |
| Heat        | 0                            | 0   | 0   | 0  |
| Steam       | 0                            | 0   | 0   | 0  |
| Cooling     | 0                            | 0   | 0   | 0  |

**C-EU8.2d**

(C-EU8.2d) For your electric utility activities, provide a breakdown of your total power plant capacity, generation, and related emissions during the reporting year by source.

**Coal – hard**

---

**Nameplate capacity (MW)**

0

**Gross electricity generation (GWh)**

0

**Net electricity generation (GWh)**

0

**Absolute scope 1 emissions (metric tons CO2e)**

0

**Scope 1 emissions intensity (metric tons CO2e per GWh)**

0

**Comment**

**Lignite**

---

**Nameplate capacity (MW)**

0

**Gross electricity generation (GWh)**

0

**Net electricity generation (GWh)**

0

**Absolute scope 1 emissions (metric tons CO2e)**

0

**Scope 1 emissions intensity (metric tons CO2e per GWh)**

0

**Comment**

**Oil**

---

**Nameplate capacity (MW)**

0

**Gross electricity generation (GWh)**

0

**Net electricity generation (GWh)**

0

**Absolute scope 1 emissions (metric tons CO2e)**

0

**Scope 1 emissions intensity (metric tons CO2e per GWh)**

0

**Comment**

**Gas**

---

**Nameplate capacity (MW)**

1,403

**Gross electricity generation (GWh)**

6,172

**Net electricity generation (GWh)**

6,172

**Absolute scope 1 emissions (metric tons CO<sub>2</sub>e)**

2,487,912

**Scope 1 emissions intensity (metric tons CO<sub>2</sub>e per GWh)**

414.5

**Comment**

**Sustainable biomass**

---

**Nameplate capacity (MW)**

0

**Gross electricity generation (GWh)**

0

**Net electricity generation (GWh)**

0

**Absolute scope 1 emissions (metric tons CO<sub>2</sub>e)**

0

**Scope 1 emissions intensity (metric tons CO<sub>2</sub>e per GWh)**

0

**Comment**

**Other biomass**

---

**Nameplate capacity (MW)**

0

**Gross electricity generation (GWh)**

0

**Net electricity generation (GWh)**

0

**Absolute scope 1 emissions (metric tons CO<sub>2</sub>e)**

0

**Scope 1 emissions intensity (metric tons CO<sub>2</sub>e per GWh)**

0

**Comment**

**Waste (non-biomass)**

---

**Nameplate capacity (MW)**

0

**Gross electricity generation (GWh)**

0

**Net electricity generation (GWh)**

0

**Absolute scope 1 emissions (metric tons CO2e)**

0

**Scope 1 emissions intensity (metric tons CO2e per GWh)**

0

**Comment**

**Nuclear**

---

**Nameplate capacity (MW)**

2,240

**Gross electricity generation (GWh)**

16,474

**Net electricity generation (GWh)**

16,474

**Absolute scope 1 emissions (metric tons CO2e)**

0

**Scope 1 emissions intensity (metric tons CO2e per GWh)**

0

**Comment**

**Fossil-fuel plants fitted with CCS**

---

**Nameplate capacity (MW)**

0

**Gross electricity generation (GWh)**

0

**Net electricity generation (GWh)**

0

**Absolute scope 1 emissions (metric tons CO2e)**

0

**Scope 1 emissions intensity (metric tons CO2e per GWh)**

0

**Comment**

**Geothermal**

---

**Nameplate capacity (MW)**

0

**Gross electricity generation (GWh)**

0

**Net electricity generation (GWh)**

0

**Absolute scope 1 emissions (metric tons CO2e)**

0

**Scope 1 emissions intensity (metric tons CO2e per GWh)**

0

**Comment**

**Hydropower**

---

**Nameplate capacity (MW)**

3,860

**Gross electricity generation (GWh)**

4,584

**Net electricity generation (GWh)**

4,584

**Absolute scope 1 emissions (metric tons CO2e)**

0

**Scope 1 emissions intensity (metric tons CO2e per GWh)**

0

**Comment**

## Wind

---

**Nameplate capacity (MW)**

0

**Gross electricity generation (GWh)**

0

**Net electricity generation (GWh)**

0

**Absolute scope 1 emissions (metric tons CO2e)**

0

**Scope 1 emissions intensity (metric tons CO2e per GWh)**

0

**Comment**

## Solar

---

**Nameplate capacity (MW)**

152

**Gross electricity generation (GWh)**

246

**Net electricity generation (GWh)**

246

**Absolute scope 1 emissions (metric tons CO2e)**

0

**Scope 1 emissions intensity (metric tons CO2e per GWh)**

0

**Comment**

## Marine

---

**Nameplate capacity (MW)**

0

**Gross electricity generation (GWh)**

0

**Net electricity generation (GWh)**

0

**Absolute scope 1 emissions (metric tons CO2e)**

0

**Scope 1 emissions intensity (metric tons CO<sub>2</sub>e per GWh)**

0

**Comment**

**Other renewable**

---

**Nameplate capacity (MW)**

0

**Gross electricity generation (GWh)**

0

**Net electricity generation (GWh)**

0

**Absolute scope 1 emissions (metric tons CO<sub>2</sub>e)**

0

**Scope 1 emissions intensity (metric tons CO<sub>2</sub>e per GWh)**

0

**Comment**

**Other non-renewable**

---

**Nameplate capacity (MW)**

0

**Gross electricity generation (GWh)**

0

**Net electricity generation (GWh)**

0

**Absolute scope 1 emissions (metric tons CO<sub>2</sub>e)**

0

**Scope 1 emissions intensity (metric tons CO<sub>2</sub>e per GWh)**

0

**Comment**

**Total**

---

**Nameplate capacity (MW)**

7,655

**Gross electricity generation (GWh)**

27,476

**Net electricity generation (GWh)**

27,476

**Absolute scope 1 emissions (metric tons CO<sub>2</sub>e)**

2,487,912

**Scope 1 emissions intensity (metric tons CO<sub>2</sub>e per GWh)**

90.55

**Comment**

## C8.2e

**(C8.2e) Provide details on the electricity, heat, steam, and/or cooling amounts that were accounted for at a zero or near-zero emission factor in the market-based Scope 2 figure reported in C6.3.**

---

**Sourcing method**

Other, please specify  
Grid mix of renewable electricity

**Energy carrier**

Electricity

**Low-carbon technology type**

Renewable energy mix, please specify  
Solar PV, concentrated solar power (CSP), wind, hydropower, nuclear, biomass  
(including biogas)

**Country/area of low-carbon energy consumption**

United States of America

**Tracking instrument used**

Other, please specify  
CEC Power Source Disclosure Reporting program and PG&E's Power Content  
Label provided to customers

**Low-carbon energy consumed via selected sourcing method in the reporting year (MWh)**

223,149

**Country/area of origin (generation) of the low-carbon energy or energy attribute**

United States of America

**Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)**

1,900

**Comment**

After accounting for consumed electricity through the Solar Choice program, 82% of delivered electricity was delivered by zero-emitting resources [(% zero-emitting)\*(electricity consumption - Solar Choice MWh) + Solar Choice MWh] = ~79%\*(269,207-10,242)+10,242 = 223,149.

## C8.2g

**(C8.2g) Provide a breakdown of your non-fuel energy consumption by country.**

---

**Country/area**

United States of America

**Consumption of electricity (MWh)**

269,207

**Consumption of heat, steam, and cooling (MWh)**

0

**Total non-fuel energy consumption (MWh) [Auto-calculated]**

269,207

## C-EU8.4

**(C-EU8.4) Does your electric utility organization have a transmission and distribution business?**

Yes

## C-EU8.4a

**(C-EU8.4a) Disclose the following information about your transmission and distribution business.**

---

**Country/Region**

United States of America

**Voltage level**

Transmission (high voltage)

**Annual load (GWh)**

84,756

**Annual energy losses (% of annual load)**

3.89

**Scope where emissions from energy losses are accounted for**

Scope 2 (market-based)

**Emissions from energy losses (metric tons CO<sub>2</sub>e)**

150,241

**Length of network (km)**

29,000

**Number of connections**

35

**Area covered (km<sup>2</sup>)**

181,299

**Comment**

As of December 31, 2021, PG&E owned approximately 18,000 circuit miles of interconnected transmission lines operating at voltages ranging from 60 kV to 500 kV. PG&E also operated 35 electric transmission substations with a capacity of approximately 66,000 MVA. PG&E's electric transmission system is interconnected with electric power systems in the Western Electricity Coordinating Council, which includes many western states, the Canadian provinces of Alberta and British Columbia, and parts of Mexico.

PG&E does not calculate the split between our transmission and distribution emissions from line-losses. The Scope 2 emission value and percentage of annual energy losses represent the total line-losses for PG&E's transmission and distribution system.

---

**Country/Region**

United States of America

**Voltage level**

Distribution (low voltage)

**Annual load (GWh)**

84,756

**Annual energy losses (% of annual load)**

3.89

**Scope where emissions from energy losses are accounted for**

Scope 2 (market-based)

**Emissions from energy losses (metric tons CO<sub>2</sub>e)**

150,241

**Length of network (km)**

173,809

**Number of connections**

826

**Area covered (km<sup>2</sup>)**

181,299

**Comment**

PG&E's electric distribution network consists of approximately 108,000 circuit miles of distribution lines (of which, as of December 31, 2021, approximately 25% are underground and approximately 75% are overhead), 68 transmission switching substations, and 758 distribution substations, with a capacity of approximately 32,000 MVA. PG&E's distribution network interconnects with our transmission system, primarily at switching and distribution substations, where equipment reduces the high-voltage transmission voltages to lower voltages, ranging from 44 kV to 2.4 kV, suitable for distribution to PG&E's customers.

These distribution substations serve as the central hubs for PG&E's electric distribution network. Emanating from each substation are primary and secondary distribution lines connected to local transformers and switching equipment that link distribution lines and provide delivery to end-users. In some cases, PG&E sells electricity from our distribution facilities to entities, such as municipal and other utilities, that resell the electricity. PG&E operates electric distribution control center facilities in Concord, Rocklin, and Fresno, California; these control centers form a key part of PG&E's efforts to create a smarter, more resilient grid.

PG&E does not calculate the split between our transmission and distribution emissions from line-losses. The Scope 2 emission value and percentage of annual energy losses represent the total line-losses for PG&E's transmission and distribution system.

## C9. Additional metrics

### C9.1

**(C9.1) Provide any additional climate-related metrics relevant to your business.**

### C-EU9.5a

**(C-EU9.5a) Break down, by source, your organization's CAPEX in the reporting year and CAPEX planned over the next 5 years.**

**Coal – hard**

---

**CAPEX in the reporting year for power generation from this source (unit currency as selected in C0.4)**

0

**CAPEX in the reporting year for power generation from this source as % of total CAPEX for power generation in the reporting year**

0

**CAPEX planned over the next 5 years for power generation from this source as % of total CAPEX planned for power generation over the next 5 years**

0

**Explain your CAPEX calculations, including any assumptions**

Not applicable/not used in operations.

### Lignite

---

**CAPEX in the reporting year for power generation from this source (unit currency as selected in C0.4)**

0

**CAPEX in the reporting year for power generation from this source as % of total CAPEX for power generation in the reporting year**

0

**CAPEX planned over the next 5 years for power generation from this source as % of total CAPEX planned for power generation over the next 5 years**

0

**Explain your CAPEX calculations, including any assumptions**

Not applicable/not used in operations.

### Oil

---

**CAPEX in the reporting year for power generation from this source (unit currency as selected in C0.4)**

0

**CAPEX in the reporting year for power generation from this source as % of total CAPEX for power generation in the reporting year**

0

**CAPEX planned over the next 5 years for power generation from this source as % of total CAPEX planned for power generation over the next 5 years**

0

**Explain your CAPEX calculations, including any assumptions**

Not applicable/not used in operations.

## Gas

---

**CAPEX in the reporting year for power generation from this source (unit currency as selected in C0.4)**

10,769,000

**CAPEX in the reporting year for power generation from this source as % of total CAPEX for power generation in the reporting year**

4

**CAPEX planned over the next 5 years for power generation from this source as % of total CAPEX planned for power generation over the next 5 years**

4

**Explain your CAPEX calculations, including any assumptions**

Capital budget includes costs primarily related to coworker safety or regulatory requirements for natural gas generation and costs to install new or replace existing equipment or components to support natural gas generation activities.

## Sustainable biomass

---

**CAPEX in the reporting year for power generation from this source (unit currency as selected in C0.4)**

0

**CAPEX in the reporting year for power generation from this source as % of total CAPEX for power generation in the reporting year**

0

**CAPEX planned over the next 5 years for power generation from this source as % of total CAPEX planned for power generation over the next 5 years**

0

**Explain your CAPEX calculations, including any assumptions**

Not applicable/not used in operations.

## Other biomass

---

**CAPEX in the reporting year for power generation from this source (unit currency as selected in C0.4)**

0

**CAPEX in the reporting year for power generation from this source as % of total CAPEX for power generation in the reporting year**

0

**CAPEX planned over the next 5 years for power generation from this source as % of total CAPEX planned for power generation over the next 5 years**

0

**Explain your CAPEX calculations, including any assumptions**

Not applicable/not used in operations.

**Waste (non-biomass)**

---

**CAPEX in the reporting year for power generation from this source (unit currency as selected in C0.4)**

0

**CAPEX in the reporting year for power generation from this source as % of total CAPEX for power generation in the reporting year**

0

**CAPEX planned over the next 5 years for power generation from this source as % of total CAPEX planned for power generation over the next 5 years**

0

**Explain your CAPEX calculations, including any assumptions**

Not applicable/not used in operations.

**Nuclear**

---

**CAPEX in the reporting year for power generation from this source (unit currency as selected in C0.4)**

9,710,000

**CAPEX in the reporting year for power generation from this source as % of total CAPEX for power generation in the reporting year**

4

**CAPEX planned over the next 5 years for power generation from this source as % of total CAPEX planned for power generation over the next 5 years**

4

**Explain your CAPEX calculations, including any assumptions**

Capital budget includes replacement of equipment and capital structures, systems, and components to safely and reliably operate and protect the plant. The total also includes costs to design, develop, and enhance applications, systems, and infrastructure technology solutions, and projects established for nuclear safety and security regulatory-mandated projects.

**Geothermal**

---

**CAPEX in the reporting year for power generation from this source (unit currency as selected in C0.4)**

0

**CAPEX in the reporting year for power generation from this source as % of total CAPEX for power generation in the reporting year**

0

**CAPEX planned over the next 5 years for power generation from this source as % of total CAPEX planned for power generation over the next 5 years**

0

**Explain your CAPEX calculations, including any assumptions**

Not applicable/not used in operations.

## Hydropower

---

**CAPEX in the reporting year for power generation from this source (unit currency as selected in C0.4)**

236,634,000

**CAPEX in the reporting year for power generation from this source as % of total CAPEX for power generation in the reporting year**

92

**CAPEX planned over the next 5 years for power generation from this source as % of total CAPEX planned for power generation over the next 5 years**

92

**Explain your CAPEX calculations, including any assumptions**

Capital budget includes purchase of tools and equipment required to perform various functions to maintain the safety and reliability of hydroelectric generation operations, costs for complying with the conditions required by FERC licenses, and other compliance work.

## Wind

---

**CAPEX in the reporting year for power generation from this source (unit currency as selected in C0.4)**

0

**CAPEX in the reporting year for power generation from this source as % of total CAPEX for power generation in the reporting year**

0

**CAPEX planned over the next 5 years for power generation from this source as % of total CAPEX planned for power generation over the next 5 years**

0

**Explain your CAPEX calculations, including any assumptions**

Not applicable/not used in operations.

## Solar

---

**CAPEX in the reporting year for power generation from this source (unit currency as selected in C0.4)**

0

**CAPEX in the reporting year for power generation from this source as % of total CAPEX for power generation in the reporting year**

0

**CAPEX planned over the next 5 years for power generation from this source as % of total CAPEX planned for power generation over the next 5 years**

0

**Explain your CAPEX calculations, including any assumptions**

Not applicable in the reporting year.

### Marine

---

**CAPEX in the reporting year for power generation from this source (unit currency as selected in C0.4)**

0

**CAPEX in the reporting year for power generation from this source as % of total CAPEX for power generation in the reporting year**

0

**CAPEX planned over the next 5 years for power generation from this source as % of total CAPEX planned for power generation over the next 5 years**

0

**Explain your CAPEX calculations, including any assumptions**

Not applicable/not used in operations.

### Fossil-fuel plants fitted with CCS

---

**CAPEX in the reporting year for power generation from this source (unit currency as selected in C0.4)**

0

**CAPEX in the reporting year for power generation from this source as % of total CAPEX for power generation in the reporting year**

0

**CAPEX planned over the next 5 years for power generation from this source as % of total CAPEX planned for power generation over the next 5 years**

0

**Explain your CAPEX calculations, including any assumptions**

Not applicable/not used in operations.

### Other renewable (e.g. renewable hydrogen)

---

**CAPEX in the reporting year for power generation from this source (unit currency as selected in C0.4)**

0

**CAPEX in the reporting year for power generation from this source as % of total CAPEX for power generation in the reporting year**

0

**CAPEX planned over the next 5 years for power generation from this source as % of total CAPEX planned for power generation over the next 5 years**

0

**Explain your CAPEX calculations, including any assumptions**

Not applicable/not used in operations.

**Other non-renewable (e.g. non-renewable hydrogen)**

**CAPEX in the reporting year for power generation from this source (unit currency as selected in C0.4)**

0

**CAPEX in the reporting year for power generation from this source as % of total CAPEX for power generation in the reporting year**

0

**CAPEX planned over the next 5 years for power generation from this source as % of total CAPEX planned for power generation over the next 5 years**

0

**Explain your CAPEX calculations, including any assumptions**

Not applicable/not used in operations.

## C-EU9.5b

**(C-EU9.5b) Break down your total planned CAPEX in your current CAPEX plan for products and services (e.g. smart grids, digitalization, etc.).**

| Products and services | Description of product/service  | CAPEX planned for product/service | Percentage of total CAPEX planned products and services | End of year CAPEX plan |
|-----------------------|---|-----------------------------------|---|------------------------|
| Electric vehicles     | PG&E has long been an industry leader in programs that encourage and facilitate the growth of electric vehicles (EVs) in California. Our programs cover a wide range of offerings and serve a variety of customers. | 560,000,000                       | 10  | 2025                   |

|            |  |            |   |      |
|------------|--|------------|---|------|
|            | <p>PG&amp;E’s \$560 million of EV programs through 2025 is one of the largest utility investment portfolios in the United States. PG&amp;E’s EV Charge Network portfolio includes:</p> <p>(1) SB 350 Programs: up to approximately \$269 million to support make ready infrastructure for medium and heavy-duty fleets in the EV Fleet program (ending 2024) and to support DC fast charger installations at public sites in the EV Fast Charge program (ending 2025);</p> <p>(2) the EV Schools and Parks program: an approximately \$11 million program (ending 2023) to install charging infrastructure at California schools and state parks and beaches; and</p> <p>(3) the Empower EV program: an approximately \$4 million program (ending 2022) that supports chargers and panel upgrades for low- and moderate-income customers through incentives and education and outreach opportunities.</p> <p>(4) the proposed EV Charge 2 program: \$276M extension of the EVCN program (concluded in 2021) to install approximately 16,000 L2 and DCFC chargers at multi-family housing, workplaces, and public destinations from 2023-2028. Program must still be approved by the CPUC</p> <p>The percentage provided compares PG&amp;E's EV program investments through 2025 to PG&amp;E's total 2021 capital expenditures for electric operations.</p> |            |   |      |
| Smart grid | <p>Highlights of PG&amp;E’s Smart Grid deployment update include:</p> <p>(1) Distribution Supervisory Control and Data Acquisition (SCADA) Program, which is focused on increasing SCADA penetration in the distribution system and</p>  | 78,000,000 | 2 | 2022 |

|  |  |  |  |  |
|--|--|--|--|--|
|  | <p>improving reliability for PG&amp;E's customers. PG&amp;E's goal is to achieve 100% visibility and control over all critical distribution substation breakers over the next few years by adding or replacing SCADA for targeted substations and circuit breakers. Between 2011 and 2020, the project upgraded or replaced SCADA in 517 substations and 2,230 breakers. PG&amp;E aims to achieve 98% penetration by December 2022.</p> <p>(2) Modular Protection Automation and Control (MPAC) Installation Program, which aims to deploy pre-engineered, fabricated, and standardized control buildings in transmission substations. As of 2020, PG&amp;E had installed and completed 124 MPAC buildings and avoided \$2.6 million in capital costs over traditional upgrade methods in 2020.</p> <p>The percentage provided compares PG&amp;E's estimated smart grid investments to PG&amp;E's total 2021 capital expenditures for electric operations.</p> |  |  |  |
|--|--|--|--|--|

**C-CE9.6/C-CG9.6/C-CH9.6/C-CN9.6/C-CO9.6/C-EU9.6/C-MM9.6/C-OG9.6/C-RE9.6/C-ST9.6/C-TO9.6/C-TS9.6**

**(C-CE9.6/C-CG9.6/C-CH9.6/C-CN9.6/C-CO9.6/C-EU9.6/C-MM9.6/C-OG9.6/C-RE9.6/C-ST9.6/C-TO9.6/C-TS9.6) Does your organization invest in research and development (R&D) of low-carbon products or services related to your sector activities?**

|       | Investment in low-carbon R&D | Comment |
|-------|------------------------------|---------|
| Row 1 | Yes                          |         |

**C-CO9.6a/C-EU9.6a/C-OG9.6a**

**(C-CO9.6a/C-EU9.6a/C-OG9.6a) Provide details of your organization's investments in low-carbon R&D for your sector activities over the last three years.**

| Technology area | Stage of development in the reporting year | Average % of total R&D investment | R&D investment figure in the reporting | Comment |
|-----------------|--|-----------------------------------|--|---------|
|                 |  |                                   |  |         |

|  |  | over the last<br>3 years | year<br>(optional) |   |
|--|--|--------------------------|--------------------|---|
| Other, please<br>specify<br><br>Methane<br>detection<br>and<br>reduction | Applied<br>research and<br>development | 21-40%                   | 3,200,000          | <p>To reduce methane emissions from our gas operations, PG&amp;E engages in numerous technology R&amp;D efforts into new technologies to improve leak detection, quantification, and repair capabilities, as well as improvements in processes to limit the release of methane into the atmosphere.</p> <p>By partnering in a number of these efforts through research consortiums, PG&amp;E shares costs with other utilities or oil and gas companies, which allows PG&amp;E to keep R&amp;D activities cost-effective.</p> <p>PG&amp;Es R&amp;D funding related to methane abatement projects for 2022-2023 are estimated to total \$3.2 million.</p> <p>PG&amp;E has been using Differential Absorption Lidar LiDAR aerial surveys for a portion of our transmission system. Additionally, PG&amp;E is engaged in R&amp;D efforts to develop new solutions, including deploying light UAV-mounted leak detection technologies for waterway leak surveys; gas speciation to differentiate between biomethane and pipeline gas; piloting the use of small-scale cross-compression for in-line inspection projects; and evaluating various emission rate quantification technologies and techniques.</p> |
| Infrastructure<br>D <sub>1</sub>   | Applied<br>research and<br>development | 21-40%                   | 13,420,000         | <p>The CPUC established the Electric Program Investment Charge (EPIC) to provide funding for public interest investments that benefit</p>   |

|  |  |  |  |
|--|--|--|--|
|  |  |  | <p>the electricity customers of PG&amp;E, Southern California Edison, and San Diego Gas &amp; Electric. EPIC provides funding for the following public interest investments: Applied research and development, technology demonstration and deployment, and market facilitation of clean energy technologies and approaches.</p> <p>The EPIC program enables PG&amp;E to execute emerging technology demonstration and deployment projects that address emergent grid needs. Examples of projects in the third triennial investment plan period include: advanced distributed energy resource management systems and advanced distribution management system; location targeted distributed energy resources; proactive wire down mitigation; and data analytics for predictive maintenance. PG&amp;E completed a total of 36 projects in its EPIC 1 &amp; 2 triennial cycles, and has launched a total of 14 EPIC 3 projects.</p> |
|--|--|--|--|

<sup>1</sup>EPIC provides funding for the following public interest investments:  
 Applied Research and Development (R&D)  
 Technology Demonstration and Deployment  
 Market facilitation of clean energy technologies and approaches

## C10. Verification

### C10.1

**(C10.1) Indicate the verification/assurance status that applies to your reported emissions.**

|         | Verification/assurance status                          |
|---------|--|
| Scope 1 | Third-party verification or assurance process in place |

|  |  |
|--|--|
| Scope 2 (location-based or market-based) | Third-party verification or assurance process in place |
| Scope 3                                  | Third-party verification or assurance process in place |

## C10.1a

**(C10.1a) Provide further details of the verification/assurance undertaken for your Scope 1 emissions, and attach the relevant statements.**

### Verification or assurance cycle in place

Annual process

### Status in the current reporting year

Underway but not complete for reporting year – previous statement of process attached

### Type of verification or assurance

Third party verification/assurance underway

### Attach the statement

 PG&E Emissions Verification Statement 2020.pdf

### Page/ section reference

1-2

### Relevant standard

The Climate Registry's General Verification Protocol (also known as California Climate Action Registry (CCAR))

### Proportion of reported emissions verified (%)

100

## C10.1b

**(C10.1b) Provide further details of the verification/assurance undertaken for your Scope 2 emissions and attach the relevant statements.**

### Scope 2 approach

Scope 2 market-based

### Verification or assurance cycle in place

Annual process

### Status in the current reporting year

Underway but not complete for reporting year – previous statement of process attached

**Type of verification or assurance**

Third party verification/assurance underway

**Attach the statement**

 PG&E Emissions Verification Statement 2020.pdf

**Page/ section reference**

1-2

**Relevant standard**

The Climate Registry's General Verification Protocol (also known as California Climate Action Registry (CCAR))

**Proportion of reported emissions verified (%)**

100

## C10.1c

**(C10.1c) Provide further details of the verification/assurance undertaken for your Scope 3 emissions and attach the relevant statements.**

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**Scope 3 category**

Scope 3: Fuel and energy-related activities (not included in Scopes 1 or 2)  
Scope 3: Use of sold products

**Verification or assurance cycle in place**

Annual process

**Status in the current reporting year**

Underway but not complete for reporting year – previous statement of process attached

**Type of verification or assurance**

Third party verification/ assurance underway

**Attach the statement**

 PG&E Emissions Verification Statement 2020.pdf

**Page/section reference**

See Page 3. Electricity Purchased on Behalf of Customers; EPS Metric G-4; Average power deliveries metrics for system mix; All facility-specific generation metrics. Scope 3 sources include business Travel, customer natural gas use, electricity purchased on behalf of customers, employee commute, and waste.

**Relevant standard**

The Climate Registry's General Verification Protocol (also known as California Climate Action Registry (CCAR))

**Proportion of reported emissions verified (%)**

100

**C10.2**

**(C10.2) Do you verify any climate-related information reported in your CDP disclosure other than the emissions figures reported in C6.1, C6.3, and C6.5?**

Yes

**C10.2a**

**(C10.2a) Which data points within your CDP disclosure have been verified, and which verification standards were used?**

| Disclosure module verification relates to | Data verified   | Verification standard        | Please explain  |
|---|---|------------------------------|---|
| C6. Emissions data                        | Other, please specify<br>Generation emissions intensity | TCR Electric Sector Protocol | Verification of CO2 emissions intensity (lbs./MWh) of retail electricity sales (PG&E generation and procured electricity).<br> 1 |

 1 PG&E Emissions Verification Statement 2020.pdf

**C11. Carbon pricing**

**C11.1**

**(C11.1) Are any of your operations or activities regulated by a carbon pricing system (i.e. ETS, Cap & Trade or Carbon Tax)?**

Yes

**C11.1a**

**(C11.1a) Select the carbon pricing regulation(s) which impacts your operations.**

California CaT - ETS

**C11.1b**

**(C11.1b) Complete the following table for each of the emissions trading schemes you are regulated by.**

California CaT - ETS

**% of Scope 1 emissions covered by the ETS**

97

**% of Scope 2 emissions covered by the ETS**

0

**Period start date**

January 1, 2021

**Period end date**

December 31, 2021

**Allowances allocated**

33,814,879

**Allowances purchased**

0

**Verified Scope 1 emissions in metric tons CO<sub>2</sub>e**

4,383,103

**Verified Scope 2 emissions in metric tons CO<sub>2</sub>e**

0

**Details of ownership**

Facilities we own and operate

**Comment**

The California Air Resources Board (CARB) allocates allowances to electrical distribution utilities (EDU) and natural gas suppliers (NG suppliers) on behalf of their ratepayers. PG&E receives allowance allocations under the EDU and NG allocation. PG&E is required under the regulation to consign all of its allocated EDU allowances for sale in ARB-run auctions. In 2021, PG&E was required to consign at least 55% of its allocated allowances as a NG supplier for sale in CARB-run auctions. This amount will increase by 5% each year through 2030. PG&E has been authorized by the CPUC to procure compliance instruments needed to meet its GHG compliance obligations. PG&E returns the revenue from consigned allowances to customers per CPUC decisions, primarily through the California Climate Credit.\* In 2021, the total climate credits were \$17 for PG&E's residential electric customers and \$25 for PG&E's natural gas customers.

Under CARB rules, PG&E is prohibited from disclosing any non-public information concerning auction participation and we are unable to provide the number of allowances purchased. For the latest public data on allowances purchased, see CARB's 2018 - 2020 Compliance Report at <https://ww2.arb.ca.gov/sites/default/files/2021-12/2018-2020compliancecereport.xlsx>

Verified emissions in metric tons CO<sub>2</sub>e: For the latest public data, see CARB's Mandatory Reporting Rule webpage at <https://ww2.arb.ca.gov/mrr-data>

\*For more information, see: <https://www.cpuc.ca.gov/industries-and-topics/natural-gas/greenhouse-gas-cap-and-trade-program/california-climate-credit>

## C11.1d

### **(C11.1d) What is your strategy for complying with the systems you are regulated by or anticipate being regulated by?**

PG&E has a compliance obligation under CARB's C&T program for emissions from: our electric generation units that exceed the inclusion threshold; imported electricity; natural gas compressor stations; and natural gas delivered to customers that are not separately covered by the C&T program (i.e., natural gas supplier obligation).

Each year, PG&E receives an allowance allocation for the following calendar year. PG&E's obligations with respect to the allocation differ based on whether the allowances are associated with its business as an EDU, or its business as a NG supplier. Under the C&T program, allowances are allocated to EDUs at no cost for the benefit of their customers. PG&E is required under the regulation to consign its EDU allowances in CARB-managed auctions, the revenues from which are distributed to customers primarily via the biannual climate credit. Starting in 2015, allowances are also allocated to natural gas suppliers at no cost for the benefit of their customers. Only a portion of these allowances are required to be consigned to auction, the revenues from which are primarily distributed via the annual climate credit, with the remainder being used directly for compliance. The CARB requires the consignment minimum to increase by 5% per year.

Compliance entities can also purchase CARB-issued offset credits from parties that develop projects from CARB-approved protocols that reduce GHG in sectors not regulated under the cap, such as forest management, destruction of ozone depleting substances, and methane capture projects. Compliance entities can use the CARB-issued offset credits to satisfy up to 4% of their compliance obligations from 2021-2025. On specified deadlines, entities must surrender compliance instruments (i.e., allowances and offset credits) in an amount equal to their GHG emissions during the period, to the ARB.

To manage regulatory risks, compliance, and costs, PG&E developed a GHG procurement strategy as part of its Bundled Procurement Plan that was approved by the CPUC, which is confidential.

## C11.2

### **(C11.2) Has your organization originated or purchased any project-based carbon credits within the reporting period?**

No

## C11.3

### **(C11.3) Does your organization use an internal price on carbon?**

Yes

## C11.3a

**(C11.3a) Provide details of how your organization uses an internal price on carbon.**

---

### **Objective for implementing an internal carbon price**

- Navigate GHG regulations
- Change internal behavior
- Drive low-carbon investment

### **GHG Scope**

- Scope 1
- Scope 3

### **Application**

As an economy-wide market, the CA Cap-and-Trade (C&T) program covers emissions from PG&E's fossil-fuel power plants, natural gas distribution to customers not directly covered by the program, compressor stations, and electricity imported into CA. By applying a carbon price to the majority of PG&E's emissions, the C&T program allows PG&E to internalize the cost impacts of CO<sub>2</sub> emissions across our business operations. In addition to market participation, PG&E also develops an IRP according to SB350. In the IRP, we consider several scenarios that combine constraints on GHG emissions and GHG allowance prices with other factors determined by the CEC and the CPUC as well as PG&E's propriety modeling. The overarching objective of the IRP process is to ensure that CA's load serving entities (such as PG&E) meet emissions reduction/renewable energy targets that allow the electricity sector to contribute to CA's economy-wide GHG emissions reduction goals. PG&E's IRP includes a 10-year forecast.

### **Actual price(s) used (Currency /metric ton)**

### **Variance of price(s) used**

Internal prices are confidential. Historical prices are available from CARB.

PG&E uses current and projected market prices for GHG emissions allowances based on the California Cap-and-Trade program. The annual allowance auction reserve price was \$ \$17.71 in 2021 and increases annually by 5% plus the rate of inflation. The average allowance price for 2021 was \$22.24 (weighted average calculated from the four auctions held in 2021).

In our IRP process, the conforming scenario GHG emission allowances prices (\$2018) start at \$14.73 in 2020 and increase to \$53.16 in 2030. Additional scenarios and GHG emission allowances prices used by PG&E are confidential.

### **Type of internal carbon price**

Other, please specify  
Market Price

### **Impact & implication**

Integrating carbon pricing into PG&E's long term planning efforts helps achieve the three core objectives of the IRP analysis:

- **Clean Energy:** Focuses on meeting the state's aggressive goals for RPS, as well as meeting PG&E's LSE GHG planning target.
- **Reliability:** Includes PG&E's contribution to system and local reliability, in compliance with the CPUC's resource adequacy requirements.
- **Affordability:** Selects resources to meet the state's clean energy and reliability goals in a least cost manner and provides a system average rate forecast in compliance with the CPUC's requirements for IOUs.

## **C12. Engagement**

### **C12.1**

#### **(C12.1) Do you engage with your value chain on climate-related issues?**

Yes, our suppliers  
Yes, our customers/clients

### **C12.1a**

#### **(C12.1a) Provide details of your climate-related supplier engagement strategy.**

---

#### **Type of engagement**

Engagement & incentivization (changing supplier behavior)

#### **Details of engagement**

Climate change performance is featured in supplier awards scheme

#### **% of suppliers by number**

4

#### **% total procurement spend (direct and indirect)**

58

#### **% of supplier-related Scope 3 emissions as reported in C6.5**

62

#### **Rationale for the coverage of your engagement**

In 2021, we shifted our prioritization to focus on suppliers who represent 62% of the company's Scope 3 emissions for purchased goods and services (suppliers from the construction, vegetation management, and manufacturing industries). We selected this

supplier population based on a 2020 supply chain greenhouse gas hot spot assessment. (188 suppliers (out of approximately 4,500) were included in the 2021 assessment.)

We evaluate suppliers against PG&E's Supplier Environmental Performance Standards (which incorporate greenhouse gas emissions and energy use elements) and use the resulting environmental performance scores to prioritize support.

We offer training for our suppliers, including a workshop on the basics of greenhouse gas calculations and reporting. The workshop included an exercise in which attendees had the opportunity to practice how to prepare a GHG report by setting the required boundaries, selecting the key performance indicators, and using the GHG calculators to determine the Scope 1 and 2 carbon dioxide equivalent (CO<sub>2</sub>e) emissions in a given case study. In addition to the in-depth GHG calculation workshop for PG&E suppliers, we also hosted a workshop for small and diverse businesses on understanding the importance of GHG causes and impacts.

### **Impact of engagement, including measures of success**

As part of PG&E's Supplier Environmental Performance Standards, our scoring methodology (totalling five points) is broken down into three categories:

(1) Environmental Management System (EMS) & Tracking, which entails having an EMS in place to measure and track five performance areas: GHG emissions (Scope 1 and 2); energy; water; waste; and compliance with environmental requirements (2 points); (2) Setting Voluntary Reduction Goals (2 points) and (3) Public Disclosure (reporting annual progress against goals) (1 point).

To score suppliers against the Standards and identify areas for improvement, PG&E distributes an annual Sustainability Assessment to our suppliers. In 2019, we enhanced the sustainability assessment to request supplier GHG emissions and other environmental impact data. We use the assessment results to generate an Environmental Performance score for each supplier.

We encourage suppliers to meet these expectations as part of doing business with PG&E and their own continuous improvement. PG&E's Supply Chain Responsibility team provides one-on-one coaching to suppliers to identify gaps and help them enhance their environmental performance.

We benchmark our supply chain sustainability performance against members of the Supply Chain Alliance. In 2021, 53% of our respondents measured environmental performance (versus 35% for benchmarked utilities), 32% publicly reported on environmental performance (vs. 19% for benchmarked utilities), and 21% set reduction targets (vs. 32% for benchmarked utilities).

In 2021, 38% of PG&E's top-tier suppliers received a score of 3 out of 5 or higher (point breakdown outlined above). This fell short of our target of 75%, largely because we expanded the metric to require suppliers to provide environmental reduction targets

along with environmental data; as a result, the number of compliant suppliers was reduced compared to prior years. In response, PG&E has increased efforts to educate suppliers on measuring impacts and setting environmental reduction targets.

PG&E also tracks the supplier response rate to the annual Sustainability Assessment, which was 62% in 2021. This was a slight decrease from 68% in 2020, which can be attributed to 23 new suppliers who lacked familiarity with the assessment. We had a response rate of 81% from our 53 top-tier suppliers, which represented 31% of PG&E's 2020 spend.

## Comment

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### Type of engagement

Other, please specify  
Compliance and onboarding

### Details of engagement

Other, please specify  
Included climate change in supplier selection / management mechanism Climate change is integrated into supplier evaluation processes

### % of suppliers by number

4

### % total procurement spend (direct and indirect)

58

### % of supplier-related Scope 3 emissions as reported in C6.5

62

### Rationale for the coverage of your engagement

In 2021, we shifted our prioritization to focus on suppliers in the construction, vegetation management, and manufacturing industries, which is reflected in the percentages above.

More broadly, PG&E has processes for identifying, assessing, mitigating, and monitoring environmental, social, and governance (ESG) risks in the company's supplier base. To assess suppliers, PG&E leverages supplier conformance reviews against our Supplier Code of Conduct (Code), which are conducted by a third-party using data self-reported by suppliers to better understand risks and mitigation practices.

PG&E suppliers are expected to comply and be in conformance with PG&E's Code, which contains details around supplier expectations for environmental leadership and includes human rights, labor practices and conditions, child labor, fair and humane treatment, non-discrimination, and freedom of association, among other topics. The Code is included in our general terms and conditions in supplier contracts and is further

communicated via Code training workshops.

In many of our Requests for Proposals (RFP), suppliers respond to a series of environmental sustainability questions designed to gauge the maturity of their environmental sustainability program prior to onboarding a supplier. A multiple-choice format set of 12 questions focuses on a supplier's governance and operations, assessment and scope, management system attributes, extent of reporting, and supplier/sub-contractor management. There are also two open-ended questions. In the first question, the supplier shares their three to five most significant environmental risks and their corresponding risk management processes. In the second question, the supplier can highlight best practices and innovative approaches that will be used to reduce the environmental footprint of the specific scope of work referenced in the bid opportunity. These questions are included in RFPs that will result in master service agreements or in bid events over \$1 million.

### **Impact of engagement, including measures of success**

The top priorities of PG&E's supply chain management strategy are safety, reliability, affordability, customer service, and supply chain responsibility. Environmental sustainability, program maturity, and supplier diversity are heavily weighted in the evaluation score for applicable RFPs. Additionally, contractors and sub-contractors performing medium- and high-risk work are required to meet minimum pre-qualification safety requirements to perform work for or on behalf of PG&E. For some top strategic suppliers, we use a supplier scorecard review process.

In 2021, we selected 58 suppliers to participate in a Code conformance review—managing supplier risk by evaluating our suppliers' management systems. Suppliers without a proper management system in place were given a corrective action plan to help bring them into conformance with PG&E's Code.

### **Comment**

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#### **Type of engagement**

Innovation & collaboration (changing markets)

#### **Details of engagement**

Other, please specify

SF6 Free Equipment Phase In

#### **% of suppliers by number**

0

#### **% total procurement spend (direct and indirect)**

0

#### **% of supplier-related Scope 3 emissions as reported in C6.5**

0

### **Rationale for the coverage of your engagement**

Sulfur hexafluoride (SF6) is used as an electrical insulating material in high-voltage circuit breakers and gas-insulated switchgear. It's also a potent greenhouse gas. CARB's SF6 regulation requires PG&E to achieve a 1% leak rate by 2020 and maintain this rate thereafter. PG&E is working with its suppliers and other utilities to advance technologies that do not contain SF6 gas. This will reduce emissions of SF6 and, therefore, contribute to greenhouse gas reduction goals and reduce risk for PG&E.

### **Impact of engagement, including measures of success**

PG&E's near-term target is to achieve a 1% SF6 leak rate by 2021. PG&E is also working towards the longer-term objective to phase-in SF6-free equipment as it becomes available and partnering with industry groups and other energy companies to accelerate the move to SF6-free equipment.

### **Comment**

In 2021, PG&E continued to plan and contract for SF6-free circuit breakers at the 72kV and 115kV levels and gas insulated switchgear at different voltage levels as part of a pilot initiative. This equipment began to be installed in 2019 and progress continued in 2021. PG&E's Sourcing Department also amended PG&E's Qualified Supplier List to remove all 72kV equipment that contains SF6.

---

### **Type of engagement**

Information collection (understanding supplier behavior)

### **Details of engagement**

Collect climate change and carbon information at least annually from suppliers

### **% of suppliers by number**

4

### **% total procurement spend (direct and indirect)**

58

### **% of supplier-related Scope 3 emissions as reported in C6.5**

62

### **Rationale for the coverage of your engagement**

We ask suppliers to provide information on their sustainable performance through RFPs, supplier scorecard reviews, and participation in an annual Sustainability Assessment. The supplier's response to the annual Sustainability Assessment allows us to gauge the maturity of their environmental management systems and request quantitative data around their GHG, energy, water, and waste impacts.

All suppliers responding to the assessment are evaluated against PG&E's Supplier Environmental Performance Standards (which incorporate greenhouse gas emissions and energy use elements) and use the resulting environmental performance scores to prioritize support. Additionally, in 2020, PG&E performed a utility supply chain GHG hot

spot assessment with the Electric Utility Industry Sustainable Supply Chain Alliance. This resulted in the identification of construction services, vegetation management, and manufacturing as key sources of GHG emissions in our supply chain.

### **Impact of engagement, including measures of success**

PG&E distributes an annual Sustainability Assessment to our suppliers from top greenhouse gas-emitting industries (construction, vegetation management, and manufacturing) with questions on how they are managing environmental impacts in their operations, including greenhouse gas emissions, energy and water usage, waste, and materials management. PG&E uses the assessment to monitor suppliers' conformance with the company's Supplier Environmental Performance Standards and to generate an Environmental Performance score for each supplier.

In 2021, 38% of PG&E's top-tier suppliers received a score of 3 out of 5 or higher (point breakdown outlined above). This fell short of our target of 75%, largely because we expanded the metric to require suppliers to provide environmental reduction targets along with environmental data; as a result, the number of compliant suppliers was reduced compared to prior years. In response, PG&E has increased efforts to educate suppliers on measuring impacts and setting environmental reduction targets.

PG&E also tracks the supplier response rate to the annual Alliance Sustainability Assessment, which was 62% in 2021. This was a decrease from 68% in 2020, which can be attributed to 23 new suppliers who lacked familiarity with the assessment. We had a response rate of 81% from our 53 top-tier suppliers, which represented 31% of PG&E's 2020 spend.

### **Comment**

## **C12.1b**

**(C12.1b) Give details of your climate-related engagement strategy with your customers.**

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### **Type of engagement & Details of engagement**

Education/information sharing

Share information about your products and relevant certification schemes (i.e. Energy STAR)

### **% of customers by number**

100

### **% of customer - related Scope 3 emissions as reported in C6.5**

**Please explain the rationale for selecting this group of customers and scope of engagement**

We work with our customers to help them achieve energy savings and GHG emission reductions through programs and incentives for energy efficiency, demand response, and distributed energy resources.

PG&E has identified discrete customer segments to help the company develop tailored engagement strategies to ensure that PG&E offers programs and incentives that are attractive and relevant to customers and ensures those customers who would benefit from the programs and incentives are aware of the options PG&E is offering.

PG&E established a detailed Energy Efficiency Plan for 2024-2031 that outlines strategies to broaden access to energy efficiency programs, improve customer affordability, and continue supporting a carbon-neutral energy transition for all of our customers. The plan proposes to deliver \$2.1 billion worth of electric and gas system benefits to customers, while also supporting equity and long-term development of energy efficiency in California as well as advocating for improvements to building codes and appliance standards.

PG&E's plan provides energy-saving solutions to help meet the diverse needs of our customers across all customer sectors to help reduce energy use and save money. The plan makes it easier for customers to participate in energy efficiency programs and drives increased engagement in these solutions through more personalized customer experiences.

The plan includes diverse equipment incentive and financing programs, support for all-electric and electric-ready new homes and buildings, customer education, workforce education and training, and advocacy to improve appliance standards and building codes.

An example of a customer segment, PG&E recognized that not all vehicle fleet managers are alike. We implemented a targeted, persona/segment-specific outreach campaign that considered motivations for deploying EVs, commercial vehicle availability, grant funding opportunities, relevant messaging, and communications channels.

PG&E's online Energy Action Guide allows customers to search for and compare the most energy efficient products on the market and indicates Energy STAR ratings.

**Impact of engagement, including measures of success**

To help reduce their carbon footprint, we reach out to customers through a variety of channels, including mobile phones, email, web, and social media. The vast majority of customers can view and download their hourly energy usage and ways to save energy and money.

We measure a composite score of customer satisfaction – including related to our

environmental commitment – and are committed to improving satisfaction, which we benchmark against our peers. In 2018, our customer satisfaction rose to a high of 77.3, driven by customer satisfaction with service reliability and pricing. In 2019, due to PG&E's Chapter 11 filing and multiple PSPS events, customer satisfaction with PG&E decreased from the prior year to 72.6 and the score remained consistent in 2020 and 2021.

In 2021, PG&E exceeded our ambitious customer energy efficiency goals. We achieved 1,846 GWh electricity saved (vs. the 1,000 GWh target) and 43 million therms natural gas saved (vs. the 209 million therms target). Doing so helped customers avoid the emission of over 700,000 metric tons of CO<sub>2</sub>.

PG&E's Energy Savings Assistance Program helps income-qualified customers who are also CARE customers reduce energy use and better manage costs through a variety of energy education and energy efficiency measures, including home weatherization to reduce air flow in and out of the home and guidance to help reduce water use. In 2021, we provided home weatherization to 103,169 customers, exceeding our goal of 100,000 customers.

We also continued to offer workforce education and training to architects and other building professionals, leveraging remote learning technology. In 2021, we trained approximately 23,000 participants and delivered more than 500 classes and webinars, while also offering over 100 on-demand classes.

We also met the goals of our EV Charge Network Program and installed nearly 5,000 charging ports for electric vehicles, 39% of which are in disadvantaged communities.

## C12.2

### **(C12.2) Do your suppliers have to meet climate-related requirements as part of your organization's purchasing process?**

Yes, suppliers have to meet climate-related requirements, but they are not included in our supplier contracts

## C12.2a

### **(C12.2a) Provide details of the climate-related requirements that suppliers have to meet as part of your organization's purchasing process and the compliance mechanisms in place.**

---

#### **Climate-related requirement**

Climate-related disclosure through a non-public platform

#### **Description of this climate related requirement**

As part of our 2030 climate goals, PG&E established a roadmap through 2030 that focuses on engaging with suppliers in the construction services, vegetation management, and manufacturing industries to measure their Scope 1 and 2 greenhouse gas emissions and establish reduction goals (including a science-based target or a longer-term net zero goal).

In addition, suppliers are asked to complete a sustainability assessment response that measures their adoption of environmental best practices specific to their industry.

PG&E's 2030 climate goals include:

- Our plan to require targeted suppliers in the construction services, vegetation management, and manufacturing industries to share their emissions data and reduction goals with PG&E starting in 2025.
- Our 2030 goal to have 100% of these supplier partners establish a science-based target or a longer-term net zero goal.

In addition, the annual Supplier Assessment provides suppliers with detailed benchmarking that can be used to prioritize strategies to reduce their environmental impact. In addition, suppliers are asked to provide their most recent environmental performance data for energy and water use, as well as greenhouse gas emissions and waste generation.

**% suppliers by procurement spend that have to comply with this climate-related requirement**

58

**% suppliers by procurement spend in compliance with this climate-related requirement**

0

**Mechanisms for monitoring compliance with this climate-related requirement**

Supplier self-assessment

**Response to supplier non-compliance with this climate-related requirement**

Other, please specify

This will go into effect in 2025, so the supplier non-compliance process has not yet been formalized. We entered '0' in '% suppliers' above because the compliance strategy is new and the data has not yet been evaluated.

## C12.3

**(C12.3) Does your organization engage in activities that could either directly or indirectly influence policy, law, or regulation that may impact the climate?**

Row 1

**Direct or indirect engagement that could influence policy, law, or regulation that may impact the climate**

Yes, we engage directly with policy makers

Yes, we engage indirectly through trade associations

**Does your organization have a public commitment or position statement to conduct your engagement activities in line with the goals of the Paris Agreement?**

Yes

**Attach commitment or position statement(s)**

PG&E's Climate Policy Principles (attached) state that PG&E advocates for policies that: Position California to achieve economy-wide carbon neutrality by 2045 and support nation-wide decarbonization efforts consistent with science-based emissions reduction targets to achieve carbon neutrality by 2050 or sooner.

 PG&E Climate Change Policy Principles.pdf

**Describe the process(es) your organization has in place to ensure that your engagement activities are consistent with your overall climate change strategy**

Since 2006, PG&E has maintained Climate Change Policy Principles to guide our activities and ensure consistency with PG&E's climate change strategy. These Climate Policy Principles guide us on the path to achieving our climate goals.

Specifically, PG&E supports national action, and is also focused on state, regional, and local action that achieves economy-wide emission reductions efficiently, economically, and in a way that encourages the next generation of energy technologies and minimizes impacts to the U.S. economy.

Our approach to climate change policy is managed by a cross-functional team comprised of representatives from across the company. The team meets regularly and actively coordinates with PG&E's executives to share developments at the state and national levels and seek approval on policy positions.

This team also plays an integral role supporting PG&E's True North Strategy, our 10-year enterprise strategy that sets a clear strategic vision toward achieving our purpose and our climate commitments. This strategy – which includes stakeholder, policy, and regulatory advocacy as a foundational capability -- has three major components: focusing on rebuilding trust and delivering excellent service for our customers; architecting a decarbonized, safe, and reliable energy system; and enabling these outcomes by building strong foundational capabilities.

As part of this strategy, we've committed to bold climate commitments, including goals to achieve Scope 1, 2, and 3 emission reductions by 2030, a net zero energy system by 2040, and to become "climate positive" by 2050 by actively removing more greenhouse gas than we emit.

The Sustainability and Governance Committee of the PG&E Corporation Board of

Directors maintains oversight of public policy matters. The Executive Vice President of Corporate Affairs and Chief Sustainability Officer of PG&E Corporation leads the development and implementation of PG&E's public policy activities.

Much of PG&E's public policy work, including engagement with elected officials and policy makers, is done in collaboration with trade organizations as well as other organizations such as the Natural Resources Defense Council, the Alliance to Save Energy, and the Zero Emission Transportation Association.

## C12.3a

**(C12.3a) On what policy, law, or regulation that may impact the climate has your organization been engaging directly with policy makers in the reporting year?**

---

**Focus of policy, law, or regulation that may impact the climate**

Climate-related targets

**Specify the policy, law, or regulation on which your organization is engaging with policy makers**

EO B-55-18: California's goal to achieve economy-wide carbon neutrality no later than 2045.

**Policy, law, or regulation geographic coverage**

Sub-national

**Country/region the policy, law, or regulation applies to**

United States of America

**Your organization's position on the policy, law, or regulation**

Support with minor exceptions

**Description of engagement with policy makers**

PG&E is actively participating in CARB's process to update the state's Scoping Plan to achieve its 2030 greenhouse gas emission reduction target and carbon neutrality no later than 2045.

**Details of exceptions (if applicable) and your organization's proposed alternative approach to the policy, law or regulation**

PG&E supports California's implementation of carbon neutrality by 2045 in a reliable and cost-effective manner for our customers.

PG&E provided feedback on CARB's Draft 2022 Scoping Plan Update released on May 10, 2022, where we stated we believe it establishes the right framework for carbon neutrality, leading with significant economy-wide emissions reductions and balancing remaining emissions in the target year with an equivalent quantity of carbon removal. This framework is aligned with PG&E's decarbonization strategy and the long-term

decarbonization strategy of the United States.

We also highlighted several areas where CARB could strengthen the final plan:

- Developing a carbon-neutral-by-2040 scenario for comparison, which could help address stakeholder concerns about timing by demonstrating where some additional cost-effective decarbonization efforts may or may not be feasible.
- Including decarbonization of buildings through zonal electrification instead of appliance restrictions to achieve both building emission reductions and gas system cost reductions. Absent this inclusion, we are concerned that the gas transition may be unaffordable, especially for the most vulnerable Californians.

**Have you evaluated whether your organization's engagement is aligned with the goals of the Paris Agreement?**

Yes, we have evaluated, and it is aligned

---

**Focus of policy, law, or regulation that may impact the climate**

Renewable energy generation

**Specify the policy, law, or regulation on which your organization is engaging with policy makers**

SB 100: Increased California's Renewables Portfolio Standard (RPS) objectives to 60% RPS electricity by 2030 and 100% of retail sales to come from eligible renewable or carbon-free energy resources by the end of 2045.

**Policy, law, or regulation geographic coverage**

Sub-national

**Country/region the policy, law, or regulation applies to**

United States of America

**Your organization's position on the policy, law, or regulation**

Support with minor exceptions

**Description of engagement with policy makers**

SB 100 is still being implemented by the CPUC, CEC, and CARB, and PG&E is an active participant in these efforts.

PG&E is also actively participating in the Integrated Resource Planning proceeding to plan the state's electricity supply resources across all load-serving entities and meet electricity sector greenhouse gas emission targets.

**Details of exceptions (if applicable) and your organization's proposed alternative approach to the policy, law or regulation**

PG&E supports California's implementation of SB 100. PG&E generally supports the focus of this legislation, with consideration given to impact on customer rates.

PG&E's voluntary goal is to deliver 70% RPS clean electricity by 2030, which is above our compliance obligation of 60%.

**Have you evaluated whether your organization's engagement is aligned with the goals of the Paris Agreement?**

Yes, we have evaluated, and it is aligned

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**Focus of policy, law, or regulation that may impact the climate**

Other, please specify

Transportation Electrification

**Specify the policy, law, or regulation on which your organization is engaging with policy makers**

Proposed Advanced Clean Fleet regulation:

Will require fleet owners or large entities that engage fleets to purchase more ZEV trucks over time.

**Policy, law, or regulation geographic coverage**

Sub-national

**Country/region the policy, law, or regulation applies to**

United States of America

**Your organization's position on the policy, law, or regulation**

Support with minor exceptions

**Description of engagement with policy makers**

PG&E has engaged CARB in the development of the Advanced Clean Fleet regulation.

**Details of exceptions (if applicable) and your organization's proposed alternative approach to the policy, law or regulation**

PG&E is supportive of the transition to ZEVs in our own fleet and is working with CARB to support the charging infrastructure that will be necessary to meet the ZEV fleet needs.

PG&E is working to electrify our own vehicle fleet with 2030 goals to achieve:

- 100% of light-duty fleet
- 50% of medium-duty fleet
- 20% of heavy-duty fleet

**Have you evaluated whether your organization's engagement is aligned with the goals of the Paris Agreement?**

No, we have not evaluated

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**Focus of policy, law, or regulation that may impact the climate**

Other, please specify  
Transportation Electrification

**Specify the policy, law, or regulation on which your organization is engaging with policy makers**

Proposed Draft Transportation Electrification Framework

**Policy, law, or regulation geographic coverage**

Sub-national

**Country/region the policy, law, or regulation applies to**

United States of America

**Your organization's position on the policy, law, or regulation**

Support with major exceptions

**Description of engagement with policy makers**

At the CPUC, PG&E is actively participating in the Transportation Electrification Framework proceeding to develop a holistic planning process for investor-owned utility (IOU) transportation electrification investment.

**Details of exceptions (if applicable) and your organization's proposed alternative approach to the policy, law or regulation**

PG&E is supportive of the development of funding cycles to create simplicity and consistency for IOU transportation electrification investment; however, PG&E is not supportive of the proposed transition to a single state-wide infrastructure rebate program as the sole pathway for IOU transportation electrification investment post-2025.

**Have you evaluated whether your organization's engagement is aligned with the goals of the Paris Agreement?**

No, we have not evaluated

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**Focus of policy, law, or regulation that may impact the climate**

Subsidies for renewable energy projects

**Specify the policy, law, or regulation on which your organization is engaging with policy makers**

Net Energy Metering (NEM) Reform:  
California launched NEM in 1995 to jumpstart solar rooftop technologies, decrease costs, and increase renewable power in the state. Under NEM, customers with rooftop solar receive a credit on their electric bills for excess power they generate and send back to the grid.

PG&E is proud to be a rooftop solar leader: we represent nearly 20% of all rooftop solar installations nationally. However, we must reform the compensation structure to lower the overall cost of meeting climate goals, encourage adoption of energy storage, and reduce the excess cost burden for customers who cannot or do not want to install solar.

The cost of rooftop solar has reduced dramatically since NEM was launched. With NEM reform, we can continue to grow rooftop solar sustainably, while making it more equitable.

**Policy, law, or regulation geographic coverage**

Sub-national

**Country/region the policy, law, or regulation applies to**

United States of America

**Your organization's position on the policy, law, or regulation**

Support with major exceptions

**Description of engagement with policy makers**

We put forward a proposal at the CPUC that would change the way customer-sited distributed resources are compensated to ensure customer affordability, encourage solar-paired storage adoption, and address equity concerns with the current NEM program.

The CPUC is currently considering alternatives to the NEM program.

**Details of exceptions (if applicable) and your organization's proposed alternative approach to the policy, law or regulation**

Currently, the NEM program pays customer-generators about eight times what the energy they produce is worth, which raises rates for the 90% of customers who do not have rooftop solar by about 10%. The program disproportionately benefits wealthy, single-family homeowners.

Sensible reform is necessary to support customer equity and help continue California's success toward a clean energy future for all.

**Have you evaluated whether your organization's engagement is aligned with the goals of the Paris Agreement?**

No, we have not evaluated

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**Focus of policy, law, or regulation that may impact the climate**

Minimum energy efficiency requirements

**Specify the policy, law, or regulation on which your organization is engaging with policy makers**

2022 California Energy Code:

California's energy code is designed to reduce wasteful and unnecessary energy consumption in newly constructed and existing buildings. The CEC updates the Building Energy Efficiency Standards (Title 24, Parts 6 and the components of 11) every three years by working with stakeholders in a public and transparent process.

**Policy, law, or regulation geographic coverage**

Sub-national

**Country/region the policy, law, or regulation applies to**

United States of America

**Your organization's position on the policy, law, or regulation**

Support with minor exceptions

**Description of engagement with policy makers**

PG&E supported the CEC's adoption of its 2022 Energy Code for building standards, including a mandate for solar and battery technologies in multi-family high-rise and non-residential new construction. PG&E is currently participating in the 2025 Energy Code update and is the statewide lead for the State Building Codes Advocacy Energy Efficiency program. The focus of this program is working with the CEC to update the code requirements.

PG&E is also participating in the CPUC's Building Decarbonization OIR to develop a plan to assess the feasibility of significantly reducing greenhouse gas emissions from buildings.

**Details of exceptions (if applicable) and your organization's proposed alternative approach to the policy, law or regulation**

Achieving California's climate and clean air goals requires a range of approaches and tools, including increasing the use of energy-efficient electric appliances in buildings when cost-effective.

**Have you evaluated whether your organization's engagement is aligned with the goals of the Paris Agreement?**

No, we have not evaluated

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**Focus of policy, law, or regulation that may impact the climate**

Other, please specify  
Federal Carbon Pricing

**Specify the policy, law, or regulation on which your organization is engaging with policy makers**

Federal Carbon Pricing

**Policy, law, or regulation geographic coverage**

National

**Country/region the policy, law, or regulation applies to**

United States of America

**Your organization's position on the policy, law, or regulation**

Support with minor exceptions

**Description of engagement with policy makers**

PG&E has engaged Congressional policy makers directly and through allied organizations, including the CEO Climate Dialogue, to advocate for a federal price on carbon.

The CEO Climate Dialogue is a group of 22 companies with over \$1.4 trillion in combined annual revenue and four leading environmental non-profit organizations that are committed to advancing climate action and durable federal climate policy in the U.S. Congress.

**Details of exceptions (if applicable) and your organization’s proposed alternative approach to the policy, law or regulation**

Institute a well-designed federal price on carbon that enables cost-effective achievement of GHG reduction goals, covers all emitting sectors, provides flexibility in emission-reduction strategies, promotes equity, and enables harmonization across jurisdictions over time.

One of the six guiding principles of the CEO Climate Dialogue states that “an economy-wide price on carbon is the best way to use the power of the market to achieve carbon reduction goals in a simple, coherent and efficient manner.”

**Have you evaluated whether your organization’s engagement is aligned with the goals of the Paris Agreement?**

No, we have not evaluated

---

**Focus of policy, law, or regulation that may impact the climate**

Adaptation and/or resilience to climate change

**Specify the policy, law, or regulation on which your organization is engaging with policy makers**

Infrastructure Investment and Jobs Act: In November 2021, President Biden signed into law a comprehensive infrastructure bill. The measure reauthorizes, creates, and funds programs to support a range of infrastructure initiatives, including important wildfire mitigation, clean energy, clean transportation, resiliency, and cybersecurity provisions.

Under the new law, Congress authorized a new grant program at the U.S. Department of Energy for utilities to enhance the resilience of the electric grid from the impacts of extreme weather.

**Policy, law, or regulation geographic coverage**

National

**Country/region the policy, law, or regulation applies to**

United States of America

**Your organization’s position on the policy, law, or regulation**

Support with no exceptions

**Description of engagement with policy makers**

PG&E supports this new law as it invests in our nation's infrastructure to help grow our economy, create good-paying jobs, protect our environment, and ultimately help offset the costs of grid resilience investments for our customers.

PG&E has engaged the Biden Administration directly and through allied trade associations and organizations to provide input (e.g., responding to Requests for Information) as federal agencies develop funding opportunities arising from the law.

**Details of exceptions (if applicable) and your organization's proposed alternative approach to the policy, law or regulation**

**Have you evaluated whether your organization's engagement is aligned with the goals of the Paris Agreement?**

No, we have not evaluated

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**Focus of policy, law, or regulation that may impact the climate**

Other, please specify  
Transportation Electrification

**Specify the policy, law, or regulation on which your organization is engaging with policy makers**

Transportation Electrification

**Policy, law, or regulation geographic coverage**

National

**Country/region the policy, law, or regulation applies to**

United States of America

**Your organization's position on the policy, law, or regulation**

Support with no exceptions

**Description of engagement with policy makers**

PG&E has engaged federal policy makers directly and through allied organizations, including as members of the National Coalition for Advanced Transportation, the Zero Emission Transportation Association, and the Edison Electric Institute to promote policies to increase the affordability of electric transportation, expand and increase access to refueling infrastructure, educate customers about electric vehicles, and promote research and development on grid benefits.

**Details of exceptions (if applicable) and your organization's proposed alternative approach to the policy, law or regulation**

**Have you evaluated whether your organization's engagement is aligned with the goals of the Paris Agreement?**

No, we have not evaluated

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**Focus of policy, law, or regulation that may impact the climate**

Other, please specify

Clean Energy Tax Credits

**Specify the policy, law, or regulation on which your organization is engaging with policy makers**

Tax credits to support clean energy deployment, including for renewable power, energy storage, hydrogen, nuclear energy, and clean transportation.

**Policy, law, or regulation geographic coverage**

National

**Country/region the policy, law, or regulation applies to**

United States of America

**Your organization's position on the policy, law, or regulation**

Support with minor exceptions

**Description of engagement with policy makers**

PG&E has engaged federal policy makers directly and through allied organizations to support a robust expansion of clean energy and clean transportation tax credits.

**Details of exceptions (if applicable) and your organization's proposed alternative approach to the policy, law or regulation**

PG&E continues to advocate for provisions that would allow the company to monetize the tax credits for the benefit of our customers (e.g., direct pay, transferability).

**Have you evaluated whether your organization's engagement is aligned with the goals of the Paris Agreement?**

No, we have not evaluated

## C12.3b

**(C12.3b) Provide details of the trade associations your organization engages with which are likely to take a position on any policy, law or regulation that may impact the climate.**

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**Trade association**

Other, please specify

California Chamber of Commerce

**Is your organization's position on climate change consistent with theirs?**

Mixed

**Has your organization influenced, or is your organization attempting to influence their position?**

We are attempting to influence them to change their position

**State the trade association's position on climate change, explain where your organization's position differs, and how you are attempting to influence their position (if applicable)**

The California Chamber of Commerce supports climate change laws and regulations that are cost-effective, technology-neutral, and promote the use of market-based strategies to reduce GHGs. The Legislature should ensure that any changes to California law safeguard the economy while having a demonstrable impact on GHG reduction and attract private capital to the state.

PG&E is serving on the Board of Directors. We are a member of the California Chamber to ensure there is a strong voice in the regulatory and legislative arena that is advocating for cost-effective climate- and energy-related policies. Recently, we have been working with them to influence their response to the CARB Scoping Plan Update.

**Funding figure your organization provided to this trade association in the reporting year, if applicable (currency as selected in C0.4) (optional)**

**Describe the aim of your organization's funding**

**Have you evaluated whether your organization's engagement with this trade association is aligned with the goals of the Paris Agreement?**

No, we have not evaluated

---

**Trade association**

Other, please specify

California Council for Environmental and Economic Balance (CCEEB)

**Is your organization's position on climate change consistent with theirs?**

Consistent

**Has your organization influenced, or is your organization attempting to influence their position?**

We publicly promote their current position

**State the trade association's position on climate change, explain where your organization's position differs, and how you are attempting to influence their position (if applicable)**

CCEEB's Climate Change Project was launched in 2006 to assist the state in its implementation of AB 32 and the development of California climate change policies. Today, CCEEB continues to work to support California's climate leadership. The project brings together a diverse group of organizations, and frequently communicates directly with legislative and administration decision makers. The project works to ensure that California develops an efficient and effective regulatory structure and reduces GHG emissions for the greatest benefit to Californians. To protect the health of the economy, CCEEB supports credible, peer-reviewed, and transparent economic evaluations of state programs. The Climate Change Project works to ensure accurate and comprehensive emission inventories, clear and consistent reporting protocols and enforcement, and credit for early action measures, and verifiable GHG reductions.

PG&E actively participates in CCEEB's Climate Change Project and its work to develop and advocate for policy positions on pending climate change legislation and regulations. PG&E has also appointed a representative to serve on the Board of Directors.

**Funding figure your organization provided to this trade association in the reporting year, if applicable (currency as selected in C0.4) (optional)**

**Describe the aim of your organization's funding**

**Have you evaluated whether your organization's engagement with this trade association is aligned with the goals of the Paris Agreement?**

No, we have not evaluated

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**Trade association**

Other, please specify  
Silicon Valley Leadership Group

**Is your organization's position on climate change consistent with theirs?**

Mixed

**Has your organization influenced, or is your organization attempting to influence their position?**

We are not attempting to influence their position

**State the trade association's position on climate change, explain where your organization's position differs, and how you are attempting to influence their position (if applicable)**

The Silicon Valley Leadership Group (SVLG) continues to be actively involved in helping ensure the implementation of California's climate policies rewards efficiency, protects innovation, and provides flexibility to seek out and implement the lowest-cost solutions, while also meeting GHG reduction goals. In addition, the group is increasingly active in federal-level advocacy for smart energy and climate policies, as well as local climate

change resilience.

PG&E has appointed a representative to serve on the Board of Directors and PG&E's position on climate change is generally aligned with SVLG. While PG&E is not attempting to influence SVLG's position around Net Energy Metering (where we've advocated for the need for NEM Reform), PG&E actively engages with SVLG in areas of common alignment, including CARB's Scoping Plan Update, local resiliency efforts, and transportation electrification goals.

**Funding figure your organization provided to this trade association in the reporting year, if applicable (currency as selected in C0.4) (optional)**

**Describe the aim of your organization's funding**

**Have you evaluated whether your organization's engagement with this trade association is aligned with the goals of the Paris Agreement?**

No, we have not evaluated

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**Trade association**

Other, please specify

California Electric Transportation Vehicle Coalition

**Is your organization's position on climate change consistent with theirs?**

Consistent

**Has your organization influenced, or is your organization attempting to influence their position?**

We publicly promote their current position

**State the trade association's position on climate change, explain where your organization's position differs, and how you are attempting to influence their position (if applicable)**

CaETC supports and advocates for the transition to a zero-emission transportation future as a means to spur economic growth, fuel diversity and energy independence, ensure clean air, and combat climate change. With every major automaker producing or announcing production of some type of electric vehicle, California is poised to continue to lead the transition of the transportation sector away from petroleum and towards electricity. CaETC will continue to support all aspects of the shift to electric transportation, working closely with our government, environmental, and industry partners to ensure a successful transition and cleaner air in California.

**Funding figure your organization provided to this trade association in the reporting year, if applicable (currency as selected in C0.4) (optional)**

**Describe the aim of your organization's funding**

**Have you evaluated whether your organization's engagement with this trade association is aligned with the goals of the Paris Agreement?**

Yes, we have evaluated, and it is aligned

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**Trade association**

Other, please specify

Alliance to Save Energy

**Is your organization's position on climate change consistent with theirs?**

Consistent

**Has your organization influenced, or is your organization attempting to influence their position?**

We publicly promote their current position

**State the trade association's position on climate change, explain where your organization's position differs, and how you are attempting to influence their position (if applicable)**

The Alliance states that energy efficiency is our nation's most abundant energy resource and a critical component of U.S. productivity and environmental sustainability. It is both a significant economic opportunity – representing one of the largest employment sectors in the energy economy – and the single most effective strategy we have for addressing climate change.

PG&E has appointed a representative to serve on the Board of Directors.

**Funding figure your organization provided to this trade association in the reporting year, if applicable (currency as selected in C0.4) (optional)**

**Describe the aim of your organization's funding**

**Have you evaluated whether your organization's engagement with this trade association is aligned with the goals of the Paris Agreement?**

Yes, we have evaluated, and it is aligned

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**Trade association**

Other, please specify

Edison Electric Institute

**Is your organization's position on climate change consistent with theirs?**

Mixed

**Has your organization influenced, or is your organization attempting to influence their position?**

We have already influenced them to change their position

**State the trade association's position on climate change, explain where your organization's position differs, and how you are attempting to influence their position (if applicable)**

EEL's member companies are leading a clean energy transformation. We are united in our commitment to get the energy we provide as clean as we can as fast as we can, without compromising on the reliability or affordability that are essential to the customers and communities we serve. Today, carbon emissions from the U.S. power sector are as low as they were in 1984, while electricity use is up 72% since then. EEL's member companies are committed to continuing to reduce carbon emissions in our sector and to helping other sectors -- particularly the transportation and industrial sectors -- transition to clean, efficient electric energy.

PG&E has appointed a representative to serve on the Board of Directors, along with committees related to ESG and decarbonization.

**Funding figure your organization provided to this trade association in the reporting year, if applicable (currency as selected in C0.4) (optional)**

**Describe the aim of your organization's funding**

**Have you evaluated whether your organization's engagement with this trade association is aligned with the goals of the Paris Agreement?**

No, we have not evaluated

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**Trade association**

Other, please specify  
American Gas Association

**Is your organization's position on climate change consistent with theirs?**

Mixed

**Has your organization influenced, or is your organization attempting to influence their position?**

We are attempting to influence them to change their position

**State the trade association's position on climate change, explain where your organization's position differs, and how you are attempting to influence their position (if applicable)**

The American Gas Association's "Climate Change Position Statement" notes that the organization and its members are committed to reducing greenhouse gas emissions through smart innovation, new and modernized infrastructure, and advanced technologies that maintain reliable, resilient, and affordable energy service choices for consumers. AGA believes the development of an effective national policy approach to reducing greenhouse gas emissions and addressing climate change should: be economywide; recognize the benefits of natural gas; remove barriers to the modernization of natural gas infrastructure including for methane emission reductions; improve energy efficiency; promote use of renewable natural gas; expand research and development; and preserve customer choice.

PG&E has appointed a representative to serve on the Board of Directors, along with committees related to ESG and decarbonization.

**Funding figure your organization provided to this trade association in the reporting year, if applicable (currency as selected in C0.4) (optional)**

**Describe the aim of your organization's funding**

**Have you evaluated whether your organization's engagement with this trade association is aligned with the goals of the Paris Agreement?**

No, we have not evaluated

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**Trade association**

Other, please specify  
Nuclear Energy Institute

**Is your organization's position on climate change consistent with theirs?**

Consistent

**Has your organization influenced, or is your organization attempting to influence their position?**

We publicly promote their current position

**State the trade association's position on climate change, explain where your organization's position differs, and how you are attempting to influence their position (if applicable)**

NEI states that we need deep decarbonization to hit our climate goals. As the nation's largest source of clean energy, nuclear power is critical to reduce carbon emissions. Wind, solar, and geothermal are on the rise, but the smartest policies will ensure these technologies complement, not replace, nuclear's clean energy production.

PG&E has appointed a representative to serve on the Board of Directors.

**Funding figure your organization provided to this trade association in the reporting year, if applicable (currency as selected in C0.4) (optional)**

**Describe the aim of your organization's funding**

**Have you evaluated whether your organization's engagement with this trade association is aligned with the goals of the Paris Agreement?**

No, we have not evaluated

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**Trade association**

Other, please specify

National Hydropower Association

**Is your organization's position on climate change consistent with theirs?**

Consistent

**Has your organization influenced, or is your organization attempting to influence their position?**

We publicly promote their current position

**State the trade association's position on climate change, explain where your organization's position differs, and how you are attempting to influence their position (if applicable)**

NHA believes hydropower can facilitate the transition to a low-carbon, clean, affordable, and reliable electric power system. Hydropower projects, including conventional, run of river, marine energy, hydrokinetic and pumped storage, are critical resources to enable this transition. Hydropower can and should continue to play a key role in meeting existing and future carbon reduction goals in both the electricity and transportation sectors. Policies should be designed to achieve the most efficient carbon reductions through technology-neutral, market-based signals that incentivize the choice of "least-cost" generation that meet carbon emission goals while maintaining electric reliability. Such policies should be indifferent to project size, age, or location.

PG&E has appointed a representative to serve on the Board of Directors.

**Funding figure your organization provided to this trade association in the reporting year, if applicable (currency as selected in C0.4) (optional)**

**Describe the aim of your organization's funding**

**Have you evaluated whether your organization's engagement with this trade association is aligned with the goals of the Paris Agreement?**

No, we have not evaluated

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**Trade association**

Other, please specify

Interstate Natural Gas Association of America (INGAA)

**Is your organization's position on climate change consistent with theirs?**

Consistent

**Has your organization influenced, or is your organization attempting to influence their position?**

We are attempting to influence them to change their position

**State the trade association's position on climate change, explain where your organization's position differs, and how you are attempting to influence their position (if applicable)**

The Interstate Natural Gas Association of America (INGAA) launched in 2021 its vision for addressing climate change. The vision outlines members' commitments to reduce individual GHG emissions from natural gas transmission and storage operations and as an industry reach net-zero GHG emissions from natural gas transmission and storage operations by no later than 2050, supported by necessary technology advancements and sound public policy initiatives.

PG&E has appointed a representative to serve on the Board of Directors.

**Funding figure your organization provided to this trade association in the reporting year, if applicable (currency as selected in C0.4) (optional)**

**Describe the aim of your organization's funding**

**Have you evaluated whether your organization's engagement with this trade association is aligned with the goals of the Paris Agreement?**

No, we have not evaluated

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**Trade association**

Other, please specify

California Hydrogen Business Council

**Is your organization's position on climate change consistent with theirs?**

Consistent

**Has your organization influenced, or is your organization attempting to influence their position?**

We publicly promote their current position

**State the trade association's position on climate change, explain where your organization's position differs, and how you are attempting to influence their position (if applicable)**

As its vision, the California Hydrogen Business Council is committed to advancing the commercialization of hydrogen and fuel cells in the energy and transportation sectors to achieve California's climate, air quality, and decarbonization goals. The organization's mission is to provide clear value to its members and serve as an indispensable and leading voice in promoting the use of hydrogen and fuel cells in the energy and transportation sectors in California and beyond

PG&E has appointed a representative to serve on the Board of Directors.

**Funding figure your organization provided to this trade association in the reporting year, if applicable (currency as selected in C0.4) (optional)**

**Describe the aim of your organization's funding**

**Have you evaluated whether your organization's engagement with this trade association is aligned with the goals of the Paris Agreement?**

No, we have not evaluated

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**Trade association**

Other, please specify

The Coalition for Renewable Natural Gas (RNG Coalition)

**Is your organization's position on climate change consistent with theirs?**

Consistent

**Has your organization influenced, or is your organization attempting to influence their position?**

We publicly promote their current position

**State the trade association's position on climate change, explain where your organization's position differs, and how you are attempting to influence their position (if applicable)**

RNG Coalition advocates for sustainable development, deployment, and utilization of renewable natural gas so that present and future generations will have access to domestic, renewable, clean fuel and energy.

PG&E is participating as a member.

**Funding figure your organization provided to this trade association in the reporting year, if applicable (currency as selected in C0.4) (optional)**

**Describe the aim of your organization's funding**

**Have you evaluated whether your organization's engagement with this trade association is aligned with the goals of the Paris Agreement?**

No, we have not evaluated

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**Trade association**

Other, please specify

The Zero Emission Transportation Association

**Is your organization's position on climate change consistent with theirs?**

**Has your organization influenced, or is your organization attempting to influence their position?**

We publicly promote their current position

**State the trade association's position on climate change, explain where your organization's position differs, and how you are attempting to influence their position (if applicable)**

ZETA is the first industry-backed coalition of its kind advocating for the full adoption of electric vehicles (EV) by 2030, which will create hundreds of thousands of new jobs, secure American global EV manufacturing leadership, dramatically improve public health, and significantly reduce carbon pollution. The organization supports a broad suite of policies to advance electric transportation, including robust GHG standards for vehicles to drive down emissions and support cooperative federalism of California's Clean Air Act waiver authority.

PG&E has appointed a representative to serve on the Board of Directors.

**Funding figure your organization provided to this trade association in the reporting year, if applicable (currency as selected in C0.4) (optional)**

**Describe the aim of your organization's funding**

**Have you evaluated whether your organization's engagement with this trade association is aligned with the goals of the Paris Agreement?**

Yes, we have evaluated, and it is aligned

## C12.4

**(C12.4) Have you published information about your organization's response to climate change and GHG emissions performance for this reporting year in places other than in your CDP response? If so, please attach the publication(s).**

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### Publication

In mainstream reports

### Status

Complete

### Attach the document

 2022-Proxy-Statement-Definitive-Final-2022-03-25-(2).pdf

 2021-Annual-Report-Master\_-Web-ready-032322-Spot-K.pdf

### Page/Section reference

Whole document -  
2022 Proxy Statement  
2021 Annual Report

### Content elements

Governance  
Strategy  
Risks & opportunities  
Emissions figures  
Emission targets

### Comment

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### Publication

Other, please specify  
In voluntary Climate Strategy Report

### Status

Complete

### Attach the document

 PGE-2022 Climate-Strategy-Report.pdf

### Page/Section reference

Whole document -  
PG&E's Climate Strategy Report

**Content elements**

Governance  
Strategy  
Risks & opportunities  
Emissions figures  
Emission targets  
Other metrics

**Comment**

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**Publication**

In voluntary sustainability report

**Status**

Complete

**Attach the document**

 PGE\_CRSR\_2021.pdf

**Page/Section reference**

Whole document -  
2021 Corporate Sustainability Report

**Content elements**

Governance  
Strategy  
Risks & opportunities  
Emissions figures  
Emission targets  
Other metrics

**Comment**

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**Publication**

In other regulatory filings

**Status**

Complete

**Attach the document**

 PGE-GRC-Application-2023.pdf

**Page/Section reference**

Whole document -  
2023 GRC application

**Content elements**

Risks & opportunities

**Comment**

## C15. Biodiversity

### C15.1

**(C15.1) Is there board-level oversight and/or executive management-level responsibility for biodiversity-related issues within your organization?**

|       | Board-level oversight and/or executive management-level responsibility for biodiversity-related issues | Description of oversight and objectives relating to biodiversity  |
|-------|--|---|
| Row 1 | Yes, board-level oversight   | The Sustainability and Governance Committee of the PG&E Corporation Board of Directors has primary oversight over matters related to environmental, social, and governance (ESG) issues, including biodiversity-related issues. |

### C15.2

**(C15.2) Has your organization made a public commitment and/or endorsed any initiatives related to biodiversity?**

|       | Indicate whether your organization made a public commitment or endorsed any initiatives related to biodiversity | Biodiversity-related public commitments  |
|-------|---|--|
| Row 1 | Yes, we have made public commitments only   | Commitment to Net Positive Gain<br>Commitment to avoidance of negative impacts on threatened and protected species<br>Other, please specify<br>Land Conservation Commitment (permanent protection of 140,000 acres through donations of fee title and conservation easements, as identified by the |

|  |  |   |
|--|--|---|
|  |  | Pacific Forest and Watershed Lands Stewardship Council) |
|--|--|---|

### C15.3

**(C15.3) Does your organization assess the impact of its value chain on biodiversity?**

| Does your organization assess the impact of its value chain on biodiversity? |   |
|--|---|
| Row 1  | Yes, we assess impacts on biodiversity in our downstream value chain only |

### C15.4

**(C15.4) What actions has your organization taken in the reporting year to progress your biodiversity-related commitments?**

|       | Have you taken any actions in the reporting period to progress your biodiversity-related commitments? | Type of action taken to progress biodiversity-related commitments                             |
|-------|---|---|
| Row 1 | Yes, we are taking actions to progress our biodiversity-related commitments                           | Land/water protection<br>Land/water management<br>Species management<br>Education & awareness |

### C15.5

**(C15.5) Does your organization use biodiversity indicators to monitor performance across its activities?**

|       | Does your organization use indicators to monitor biodiversity performance? | Indicators used to monitor biodiversity performance  |
|-------|--|--|
| Row 1 | Yes, we use indicators   | State and benefit indicators<br>Other, please specify<br>In 2021, our efforts protected, created, or restored 722 acres of habitat, and managed over 3,800 acres of existing restoration or conservation projects. |

### C15.6

**(C15.6) Have you published information about your organization's response to biodiversity-related issues for this reporting year in places other than in your CDP response? If so, please attach the publication(s).**

| Report type | Content elements | Attach the document and indicate where in the document the relevant biodiversity information is located |
|-------------|------------------|---|
|             |                  |   |

|  |   |  |
|--|---|--|
| In mainstream financial reports                                      | Content of biodiversity-related policies or commitments<br>Governance<br>Impacts on biodiversity<br>Details on biodiversity indicators<br>Biodiversity strategy | Page 7 -- 2022 Joint Proxy Statement<br>📎 <sup>1</sup>   |
| In voluntary sustainability report or other voluntary communications | Content of biodiversity-related policies or commitments<br>Governance<br>Impacts on biodiversity<br>Details on biodiversity indicators<br>Biodiversity strategy | Page 100 -- 2021 Corporate Sustainability Report<br><br>Page 6 -- Climate Strategy Report<br>📎 <sup>2, 3</sup> |

📎<sup>1</sup> 2022-Proxy-Statement-Definitive-Final-2022-03-25-(2).pdf

📎<sup>2</sup> PGE-2022 Climate-Strategy-Report.pdf

📎<sup>3</sup> PGE\_CRSR\_2021.pdf

## C16. Signoff

### C-FI

**(C-FI) Use this field to provide any additional information or context that you feel is relevant to your organization's response. Please note that this field is optional and is not scored.**

### C16.1

**(C16.1) Provide details for the person that has signed off (approved) your CDP climate change response.**

|       | Job title  | Corresponding job category         |
|-------|--|------------------------------------|
| Row 1 | Executive Vice President, Corporate Affairs and Chief Sustainability Officer | Chief Sustainability Officer (CSO) |