

Corporate Responsibility and Sustainability Report

2020



Explore the report at: www.pgecorp.com/sustainability



Message from Our Leadership

To Our Stakeholders:

Today, after more than a century of service to Northern and Central California, PG&E humbly stands at a turning point unlike any other in our history.

We have taken responsibility for the devastating wildfires caused by our electric equipment in recent years, including the 2018 Camp Fire. We pleaded guilty to involuntary manslaughter in the deaths of the 84 people who lost their lives in that tragedy. We settled billions of dollars in damage claims by fire victims, as well as cities, counties, and other public entities.

We have concluded an 18-month Chapter 11 proceeding while fending off hostile takeover attempts. And we have emerged with a plan of reorganization that includes strong commitments regarding our corporate governance, operations, and financial structure that are designed to further prioritize safety and were forged with guidance from both the California Governor's Office and our state regulator.

Now, we are beginning a new era for PG&E, charting a new path toward a different future as a different company—one that will provide better outcomes and more sustainable results for all those who depend on us.

We will not do business as we did in the past. Rather, we will use the hard lessons we have learned as a driving force for continuous improvement, accountability, and sustained performance in the work we do every day.

Amid a global pandemic, we are intensifying our focus on the health and safety of our customers, workforce, and communities. And we are responding to calls for racial equity by deepening PG&E's long-standing dedication to diversity, inclusion, and equal opportunity in the workplace.

Earning back the trust we have lost will require us to meet each one of our obligations, without faltering.

Overall, we believe that the agreements that underlie our plan of reorganization position PG&E as a sustainable, financially sound utility with the appropriate governance and oversight to safely serve our customers for the long term, while also making the investments required to help the state achieve its climate and clean energy goals.

Accordingly, we are recommitting our support for California's climate leadership, including electrification of the energy grid, sufficient charging infrastructure to power millions of electric vehicles, and a carbon-neutral economy by 2045. We are adapting our systems to climate risks, particularly the rising threat of wildfires and extreme weather. And we are doing so with the recognition that both the costs and benefits of these innovations must be shared equitably across the economic spectrum.

As we pursue that vision, we understand that our success will be measured in the results we deliver, not the sincerity of our words. We invite you to judge us by that standard, and we welcome your feedback on our progress in the days ahead.

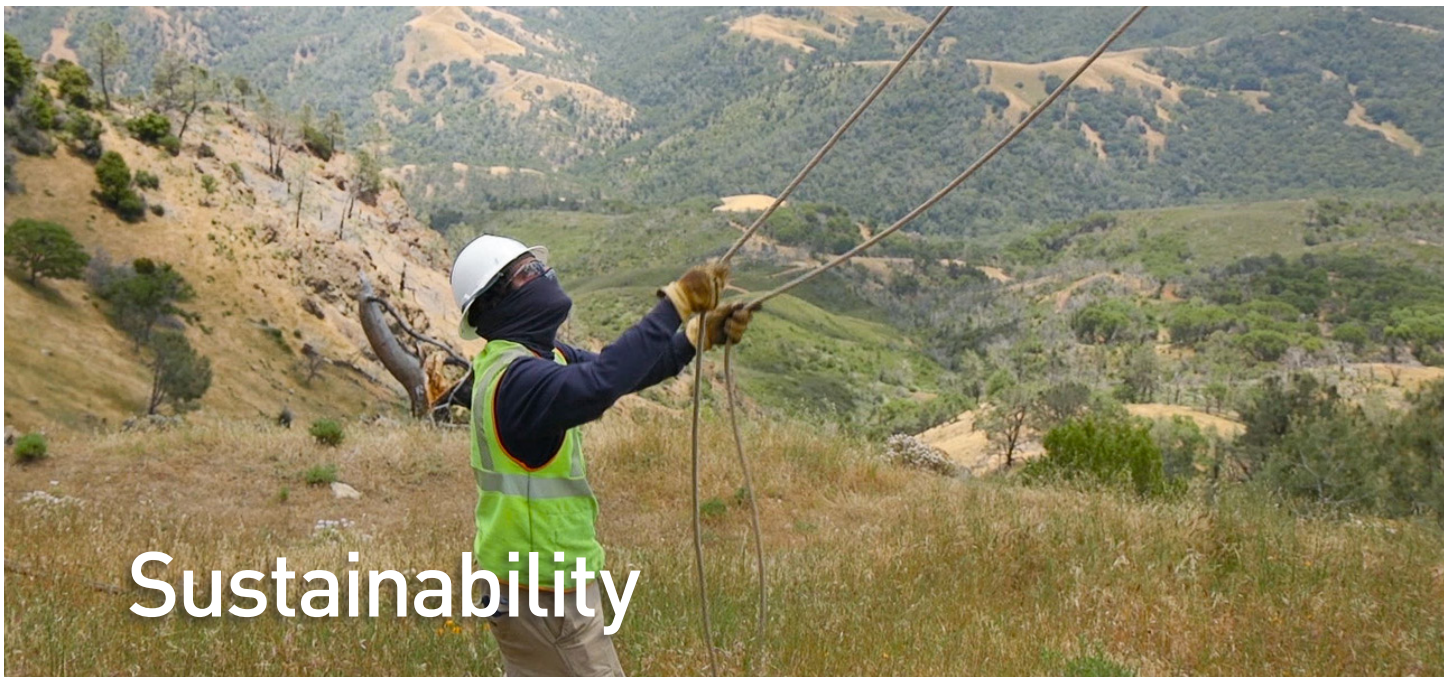
Sincerely,
William L. Smith
Interim CEO and President
PG&E Corporation

Plan of Reorganization Commitments

As part of our Plan of Reorganization for emergence from Chapter 11, PG&E made a series of commitments, all designed to further prioritize safety. PG&E made these commitments working with the Governor's Office and incorporating guidance from the President of the California Public Utilities Commission (CPUC).

The commitments include:

- Supporting the CPUC's enactment of measures to strengthen PG&E's governance and operations, including enhanced regulatory oversight and enforcement that provides course-correction tools as well as stronger enforcement if it becomes necessary;
- Hosting a state-appointed observer to provide the state with insight into PG&E's progress on safety goals;
- Appointing an independent safety monitor when the term of the court-appointed Federal Monitor expires;
- Establishing newly expanded roles of Chief Risk Officer and Chief Safety Officer, with both reporting directly to the PG&E Corporation CEO and President;
- Forming an Independent Safety Oversight Committee to provide independent review of operations, including compliance, safety leadership, and operational performance;
- Assuming all collective bargaining agreements with labor unions, pension obligations, and other employee obligations, Community Choice Aggregation servicing agreements, and all power purchase agreements as part of a broader commitment to California's clean energy future;
- Reforming executive compensation to further tie it to safety performance and customer experience;
- A commitment that PG&E Corporation will not reinstate a common stock dividend until it has recognized \$6.2 billion in non-GAAP core earnings;
- Filing a proposal with the CPUC requesting a rate-neutral \$7.5 billion securitization transaction after PG&E emerges from Chapter 11 in order to finance costs in an efficient manner that benefits customers and accelerates payment to wildfire victims; and
- Committing not to seek recovery in customer rates of any portion of the amounts that will be paid to victims of the 2015, 2017, and 2018 wildfires under the Plan when PG&E emerges from Chapter 11 (except through the rate-neutral securitization transaction).



Sustainability

As we look to the future, we are focused on implementing changes across our business to deliver safe, reliable service and become the new and transformed utility that our customers and communities expect and deserve. We recognize that regaining the trust of our customers will require operational excellence and steady performance, sustained over time, while meeting our commitments today and over the long-term.



Integrating Sustainability

PG&E defines sustainability as meeting the needs of today in a way that creates a better tomorrow—for our customers, communities, employees and the planet.

As an energy provider rooted in California, PG&E confronts choices and challenges with environmental, social and economic factors that affect the customers and communities we serve. Finding the right balance between these factors in the decisions PG&E makes is essential to achieving our goals of providing safe, reliable, affordable, and clean energy—today and into the future.

Corporate sustainability as business strategy has never been more important—taking an approach that considers PG&E's operations through the lens of preparing for the future and providing long-term value to our many stakeholders. In fact, doing so is what customers, investors, policymakers, regulators, environmental and social justice advocates and many others have come to expect from PG&E.

To help guide our decisions, we rely on our Mission, Vision and Culture framework, developed through extensive outreach and interactions with our employees, customers and other stakeholders. Importantly, it places a sustainable energy future at the center as our North Star.

Our Mission

To safely and reliably deliver affordable and clean energy to our customers and communities every single day, while building the energy network of tomorrow.

Our Vision

With a sustainable energy future as our North Star, we will meet the challenge of climate change while providing affordable energy for all customers.

Our Culture

We put safety first.

We are accountable. We act with integrity, transparency and humility.

We are here to serve our customers.

We embrace change, innovation and continuous improvement.

We value diversity and inclusion. We speak up, listen up and follow up.

We succeed through collaboration and partnership. We are one team.



Governance

On July 1, 2020, in connection with our emergence from Chapter 11, PG&E Corporation substantially changed the membership of its Board of Directors to help guide the company post-bankruptcy.

The new Board of Directors consists of 14 members, 11 of whom are new. Six of the new Board members have geographic ties to California. The Board of Directors of the Utility is largely the same as PG&E Corporation, with the Chief Executive Officer of the Utility serving as an additional member.

Upon our emergence from Chapter 11, William L. Smith became Interim Chief Executive Officer and President of PG&E Corporation effective July 1, 2020. The new Board of Directors of PG&E Corporation will be responsible for selecting a permanent Chief Executive Officer and President of PG&E Corporation.

At PG&E, sustainability is managed on three levels:

Boards of Directors

The Boards of PG&E Corporation and Pacific Gas and Electric Company have numerous permanent standing committees, which support both of the Boards' basic responsibilities. The standing committees are as follows:

- Executive
- Audit
- Compensation
- Compliance and Public Policy
- Finance
- Nominating and Governance
- Safety and Nuclear Oversight

The Compliance and Public Policy Committee of PG&E Corporation's Board of Directors has primary oversight of corporate sustainability issues, such as environmental compliance and leadership, climate change, community investments and workforce development. This includes an annual review of PG&E's sustainability practices and performance. Additional committees of the PG&E Corporation Board and the full PG&E Corporation and Pacific Gas and Electric Company Boards address other components of PG&E's sustainability commitment, including public and employee safety, operational excellence and investments to increase our delivery of clean energy and enable a low-carbon future.

Business-Wide

PG&E Corporation's Vice President of Federal Affairs and Chief Sustainability Officer is responsible for leading PG&E's corporate sustainability initiatives, reporting and engagement.

To further embed sustainability into our operations, PG&E established an internal Sustainability Leadership Council, co-chaired by the Chief Sustainability Officer and Pacific Gas and Electric Company's Chief Customer Officer. 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 to spearhead PG&E's Million Ton Challenge goal to avoid one million tons of cumulative greenhouse gas emissions from PG&E's operations from 2018 through 2022, compared to a 2016 baseline.

In addition, our Chief Sustainability Officer and Chief Risk Officer co-chair the Climate Resilience Officer Committee, which includes leaders from key departments across the business. The Committee provides leadership, guidance and governance for climate resilience objectives that meaningfully impact PG&E and the communities we serve and help ensure the continued safe, reliable and affordable operation of PG&E's system in the face of a changing climate.

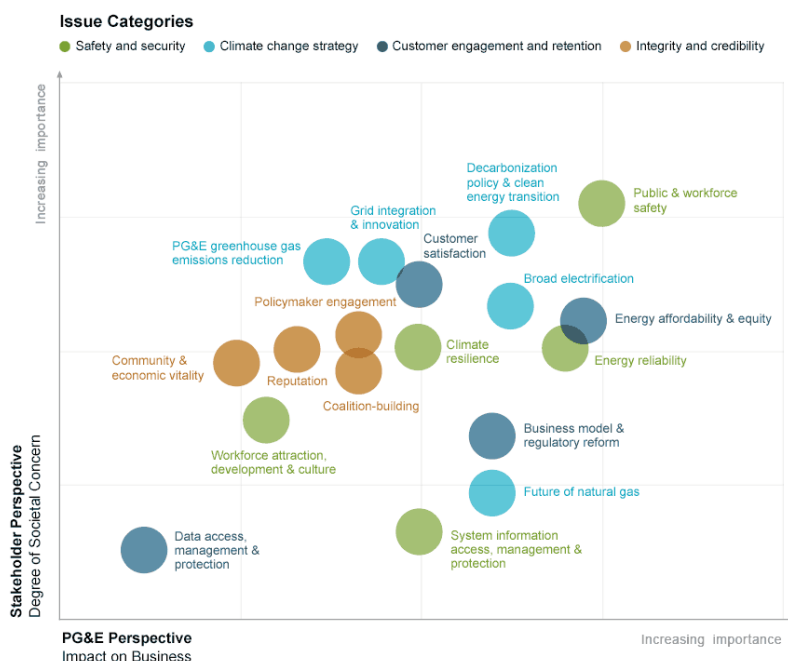
Grassroots Involvement

Employee-led initiatives throughout PG&E help integrate corporate sustainability priorities into our work. For example, our Employee Resource Groups (ERGs) provide an important link to diverse communities through volunteer service, mentoring and scholarship awards. ERG members come from every level and job function and participate across 27 chapters throughout our service area.

Materiality

To further strengthen PG&E's sustainability focus, and to inform our overall corporate strategy, PG&E completed our most recent materiality assessment for corporate sustainability in 2017. The assessment was a strategic project to help us identify topics that are material to the long-term sustainability of our business. Consistent with best practice, we plan to conduct our next materiality assessment in 2021.

Conducted in coordination with PG&E's strategic planning process, our 2017 materiality assessment integrated input from our stakeholders and members of our executive team, identified opportunities and risks, and sharpened our corporate sustainability strategy and reporting. The assessment identified 18 issues, grouped into four categories: safety and security, climate change strategy, customer engagement and retention, and integrity and credibility.



Creating Incentives

PG&E's Short-Term Incentive Plan (STIP), an at-risk part of employee compensation, reinforces PG&E's sustainability commitment by rewarding eligible employees for achieving specific goals crucial to our success. The Bankruptcy Court approved PG&E's 2019 STIP for performance management-eligible employees. The 2019 STIP was focused on the important company objectives of safety, financial health and customer impact.

The 2019 STIP was paid each quarter based on PG&E's cumulative, year-to-date results against the STIP metrics. The STIP remains an at-risk plan, subject to enterprise performance and Compensation Committee approval. In 2019, our most senior officers were not eligible to participate in the STIP. Additionally, any PG&E Corporation or Utility officer compensation will be exclusively funded by shareholders through 2022.

Short-Term Incentive Plan – Performance Measures

Measure	2019 Weight
Safety ¹	65%
Customer ²	25%
Financial ³	10%

1. Based on several subcomponents covering nuclear operations safety, electric operations safety, gas operations safety and employee safety.

2. Based on PG&E Corporation's earnings from operations.

3. Based on escalated customer complaints.



Engaging Stakeholders

To meet our commitments, it is essential that PG&E listen to the needs, expectations and guidance of our many stakeholders. PG&E seeks engagement across a broad spectrum of voices to help shape our thinking and inform a holistic and strategic view on what is best for the many constituencies we serve.

Highlights

PG&E has significantly enhanced our wildfire safety education and awareness efforts to improve customer preparedness and safety. We are listening to our customers about how we can do better by taking feedback and acting on what we hear. We are expanding our outreach efforts for this year to include:

- Additional informational resources, including videos, brochures and online tools, to help customers and communities prepare.
- Making it easier for eligible customers to join and stay in the medical baseline program.
- Additional outreach to customers in the medical baseline program, those with Access and Functional Needs, and master meter customers to address specific preparedness topics.
- Localized informational webinars to give customers and communities opportunities to ask questions and provide feedback.

To inform our efforts, PG&E established the People with Disabilities and Aging Advisory Council in 2020, an externally focused advisory council comprised of a diverse group of recognized leaders from community-based organizations who support our most vulnerable customer populations.

PG&E is also utilizing the Safety Action Center, a dedicated safety webpage featuring helpful information about wildfire risks and what customers can do to keep their home, family or business safe, including tips on how to create an emergency plan, emergency preparedness guides and videos, and links to the statewide Power of Being Prepared campaign and other resources.

We all recognize the threat posed by COVID-19 and the need to prevent and mitigate the serious risk of catastrophic wildfires during extreme weather conditions. We are determined to do all we can to address both the impact of the COVID-19 pandemic and the threat of catastrophic wildfires. Our overriding goal is to ensure public safety.

Sustainability and Community Engagement

PG&E's Sustainability Advisory Council advances PG&E's mission by providing independent expertise to help ensure that PG&E's business strategy, operations, and future energy network incorporate sustainability best practices to improve service now and in the future. Convened by PG&E Corporation's Chief Sustainability Officer, the Council is made up of a diverse group of recognized leaders in their fields, environmental and sustainability advocates, energy policy experts, and industry authorities.

In addition, PG&E's California External Affairs department convenes a California Community Advisory Group. The group serves as a forum for the exchange of ideas between PG&E and a diverse mix of community-based and civic organizations. The group provides an opportunity for these stakeholders to share valuable feedback and engage in an ongoing dialogue with PG&E about issues of importance to them and the communities they represent.

Our local public affairs teams convene Stakeholder Advisory Groups, which discuss major projects and topics relevant to the local area.

Additionally, PG&E convenes various stakeholder advisory groups for specific areas:

- **Communities of Color Advisory Group:** provides guidance on outreach strategies to effectively communicate rate options and energy affordability programs to diverse and hard to reach communities.
- **Clean Transportation Program Advisory Council:** provides feedback and guidance on PG&E's electric vehicle (EV) programs, including EV Charge Network, EV Fleet and EV Fast Charge.
- **Green Tariff Shared Renewables External Advisory Board:** provides input on PG&E's Solar Choice program, which offers customers the opportunity to purchase up to 100 percent of their power from solar energy.
- **Diablo Canyon Decommissioning Engagement Panel:** provides diverse community viewpoints to help inform PG&E's site-specific decommissioning plan on future land use and repurposing recommendations.

Because PG&E is regulated by numerous federal, state, regional and local government agencies, we also engage through the regulatory process in numerous multi-stakeholder public processes convened by the California Public Utilities Commission, the Federal Energy Regulatory Commission, the Nuclear Regulatory Commission and other regulatory agencies.

The chart below highlights some of our channels of engagement with stakeholder groups and how we are working to meet their expectations of PG&E.

Customers	Selected Channels Of Engagement
<ul style="list-style-type: none"> ▪ 5.5 million electric accounts ▪ 4.5 million natural gas accounts 	<ul style="list-style-type: none"> ▪ Enabling customers to communicate with PG&E through their channel of choice: <ul style="list-style-type: none"> • Informational webinars—part of Pacific Gas and Electric Company's Community Wildfire Safety program—to help prepare customers and communities for the growing threat of wildfire • People with Disabilities and Aging Advisory Council, which represents our most vulnerable customer populations • Customer satisfaction surveys, focus groups and other research • Online energy management and bill pay options • Self-service capabilities such as reconnecting service via Interactive Voice Response technology • Social media platforms • Communications in multiple languages and formats • Program-specific external Advisory Councils • Customer account and service representatives • Customer call centers and local offices
Communities	Selected Channels Of Engagement
<ul style="list-style-type: none"> ▪ Emergency first responders ▪ Community organizations ▪ Tribal communities ▪ Environmental organizations ▪ Economic development organizations ▪ Climate resilience organizations 	<ul style="list-style-type: none"> ▪ Public Safety Power Shutoff listening sessions and working sessions with local, state and tribal officials, to incorporate feedback and better coordinate if Pacific Gas and Electric Company needs to turn off power for safety ▪ Local PG&E public safety teams ▪ California Community Advisory Group with leaders representing diverse constituencies ▪ Diablo Canyon Decommissioning Engagement Panel, which provides diverse community viewpoints to help inform PG&E's site-specific decommissioning plan on future land use and repurposing recommendations ▪ Stakeholder Advisory Groups, which discuss major projects and topics relevant to local areas ▪ Tribal Liaison and Environmental Justice program manager ▪ Participation in coalitions and networks, such as Ceres, Center for Climate and Energy Solutions and the Electric Power Research Institute ▪ Active participation of officers and other employees on nonprofit boards ▪ Employee volunteers ▪ Community meetings, conferences and other community events ▪ Support for local programs through community investments

Employees	Selected Channels Of Engagement
<ul style="list-style-type: none"> Current employees Prospective employees Retirees Labor unions 	<ul style="list-style-type: none"> Regular communication on the Chapter 11 reorganization process, the Community Wildfire Safety Program and our role in keeping customers and communities safe Biennial employee engagement survey, quarterly pulse surveys and voluntary upward feedback surveys Eleven ERGs and three Engineering Networks (ENGs) across 27 chapters to promote diversity and inclusion, employee development and community service Corrective Action Program for employee feedback and continuous improvement Awards recognizing employee leadership on safety, diversity, community service, innovation and the environment Mentoring programs Health and wellness resources: 24/7 nurse hotline, Employee Assistance Program, and Peer Volunteer Network for assistance and support for employees with drug or alcohol problems Workforce recruiting and training programs, including PowerPathway Training and skills development, including leadership development Labor and management joint engagement on key topics Here to Help Hotline for any employee who encounters a stakeholder with a grievance
Investors	Selected Channels Of Engagement
<p>As of December 31, 2019:</p> <ul style="list-style-type: none"> Approximately 72.9 percent of PG&E Corporation common shares outstanding were held by institutional investors The top 10 institutional investors owned approximately 41 percent of our outstanding common stock 	<ul style="list-style-type: none"> Quarterly earnings releases and press releases One-on-one meetings, non-deal roadshows and industry conferences Required SEC disclosures Discussions with institutional investors regarding corporate governance, wildfire mitigation efforts and regulatory matters Consistent Board-level access and interactions Dissemination of documents and information related to wildfires, the Chapter 11 proceeding, governance, regulation and financial plans on the Investor Relations website Investor relations communications (as-necessary and scheduled correspondence) Past engagement on sustainability has included events such as CECP's Strategic Investor Initiative and the Investor Network Summit on Climate Risk, which focuses on the business risk and opportunities of climate change

Suppliers

Selected Channels Of Engagement

- Diverse suppliers (women-, minority-, service-disabled-veteran- and LGBTQ-owned businesses)
 - Local suppliers
 - Small suppliers
 - Prime suppliers
 - Supplier Diversity Program with specific spending targets to support the inclusion of diverse businesses in corporate supply chains
 - Technical assistance workshops and capacity-building training that support safe, competitive, sustainable and thriving small and diverse suppliers
 - Trade Show Trade Missions to engage diverse businesses to gain exposure to new trends and technologies, meet potential partners and customers
 - Participation in annual CPUC General Order 156 Supplier Diversity En Banc
 - University-led business program scholarships to support the growth and development of small and diverse suppliers
 - Partnerships with diverse community-based organizations including local ethnic chambers of commerce and national groups such as the National Utilities Diversity Council, National Minority Supplier Development Council and Women's Business Enterprise National Council
 - Supplier Environmental Sustainability Program to drive supplier environmental performance improvement, including annual supplier sustainability survey
 - Engagement with organizations including the Electric Utility Industry Sustainable Supply Chain Alliance and Sustainable Purchasing Leadership Council
 - Engagement with local and national diverse business organizations
 - Supplier Code of Conduct training and expectations
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Key Sustainability Indicators

Business

2019 Result Legend: ■ = Target met or exceeded ■ = Target not met

Metric	2019 Target	2019 Result	2020 Target
Gas Operations			
Strength-Tested Transmission Pipeline (miles)	102.6	114.9	33.1
Transmission Pipeline Replacement (miles)	14.4	21.3	34.0
Valves Automated (number of valves)	23	23	20
Retrofitted Transmission Pipeline (projects)	12	10	14
Gas Dig-Ins¹ (dig-ins per 1,000 Underground Service Alert tickets)	1.70	1.04	1.44
Electric Operations			
System Average Interruption Frequency Index (SAIFI) average number of outages per customer	1.089	1.129	1.136
System Average Interruption Duration Index (SAIDI) average duration of outages per customer in minutes	129.2	148.8	147.6
Customers experiencing five or more sustained outages (CEMI-5)	2.61%	3.20%	3.12%
Nuclear Operations			
Diablo Canyon Power Plant Reliability and Safety	93.7	97.5	95.0
Ethics and Compliance			
Employees Completing Annual Compliance and Ethics Training	99.8%	99.9%	99.8%
Employees Completing Annual Code of Conduct Training	99.8%	99.9%	99.8%

1. In 2019, Gas Dig-Ins measured the total number of third-party dig-ins (i.e., damage from a third party resulting in repair or replacement of an underground PG&E facility). In 2020, the measure was expanded to also include dig-ins from first and second parties.

2. Refers to the sum of 11 performance indicators developed by the nuclear power industry for nuclear power generation.

Safety

2019 Result Legend: ■ = Target met or exceeded ■ = Target not met

Metric	2019 Target	2019 Result	2020 Target
Wildfire Safety			
System Hardening (line miles): Stronger poles, covered lines and/or targeted undergrounding	150	171	241
Enhanced Vegetation Management (line miles): Inspecting, pruning and removing vegetation	2,450	2,498	1,800
Visual and Aerial Inspections on: ≈50,000 transmission, ≈700,000 distribution and ≈200 substation assets in High Fire Threat Districts (HFTD)	100%	100%	See footnote 1
High-Definition Cameras (cameras): Improving real-time monitoring of high-risk areas and conditions	96	133	200
Weather Stations (stations): Enhancing weather forecasting and modeling	400	426	400
Sectionalizing Devices (devices): Separating the grid into small sections for operational flexibility	N/A	287	592
Transmission Line Switches (devices): Enabling targeted transmission outages to lessen downstream customer impacts	N/A	N/A	23
Public Safety			
Gas First-Time In-Line Inspections²	183.0	266.4	164.7
Gas Emergency Response³ (minutes)	21.0	20.8	20.8
Electric Emergency Response⁴ (percentage within 60 minutes)	97.5%	95.3%	96.5%
Asset Records Duration Index⁵	1.0	1.2	N/A
Employee Safety			
Days Away, Restricted or Transferred (DART) Rate⁶	1.34	2.05	0.90
Preventable Motor Vehicle Incidents Rate⁷	2.45	2.91	2.41

1. Target is annual inspections for Tier 3 HFTD facilities and three-year cycles for Tier 2 HFTD facilities.

2. Measures the successful completion of first-time in-line inspections of newly-constructed natural gas transmission lines.

3. Average response time in minutes to an immediate response gas emergency order.

4. Percentage of time that PG&E personnel are on site within 60 minutes after receiving a 911 call of a potential PG&E electric hazard.

5. Weighted index that tracks the average number of days to complete the as-built process in the system of record for electric and gas capital and expense jobs from the time construction is completed in the field or released to operations. The Gas Operations Index consists of three weighted sub-metrics: Transmission (60%), Station (10%), Distribution (30%). The Electric Operations Index consists of three weighted sub-metrics: Transmission Line (25%), Substation (25%), Distribution (50%). In 2020, PG&E began tracking submetrics separately, rather than one consolidated metric.

6. Measures how frequently DART cases occur for every 200,000 hours worked, or for approximately every 100 employees.

7. Measures the number of preventable motor vehicle incidents occurring that the driver could have reasonably avoided, per 1 million miles driven.

Customers and Communities

2019 Result Legend: ■ = Target met or exceeded ■ = Target not met

Metric	2019 Target	2019 Result	2020 Target
Customer Satisfaction			
Escalated Customer Complaints ¹	12.2	10.1	10.1
Customer Connection Cycle Time ² (business days)	10	10	10
Gas And Electric Meter Billing Accuracy ³ (percentage of bills)	99.71%	99.65%	99.59%
Energy Affordability			
Energy Savings Assistance Program (number of homes weatherized)	99,175	106,064	104,222
California Alternative Rates For Energy (number of eligible customers enrolled)	1,302,000	1,382,663	1,350,000
Customer Energy Efficiency⁴			
Electricity Saved (GWh)	1,079	1,253	955
Natural Gas Saved (Million Therms)	33.0	27.6	25
Generation Capacity Avoided (MW)	222	253	195
Clean Transportation			
Electric Vehicle Charge Network (EVCN) (number of charge ports)	N/A ⁵	1,703	4,500 ⁶
Supplier Diversity			
Spending on Certified Diverse Suppliers (percentage of overall purchasing expenditures)	38.0%	41.2%	38.0%

1. Measures the number of customer complaints escalated to the CPUC per 100,000 adjusted customers.

2. Tracks the 12-month average design and construction cycle time for electric residential disconnect/reconnect work requested by customers and performed through Express Connections (our customer gateway).

3. Refers to the percentage of bills that are not adjusted after being mailed to the customer. Each year, a very small percentage of bills must be estimated, largely due to intermittent connectivity (similar to a cell phone temporarily losing its connection).

4. Data refers to annual energy savings or the first-year impacts associated with installed customer energy efficiency projects, as appropriate. Targets are based on mandated energy efficiency savings as agreed upon with the CPUC. All data is as filed with the CPUC in Pacific Gas and Electric Company's Energy Efficiency Program Portfolio Reports. Annual energy savings include savings from codes and standards programs and, per CPUC policy governing energy efficiency goals, include savings from Regional Energy Network or Community Choice Aggregator programs in PG&E's service area, which represented approximately 1% or less of total annual savings.

5. PG&E's transportation electrification programs are multi-year efforts with end-of-program targets rather than annual targets. PG&E's EVCN program target is to install 4,500 Level 2 charging ports by the end of 2020, subject to modification based on conditions outside PG&E's control, such as customer needs, electric vehicle market conditions, weather, economic conditions, the COVID-19 crisis, and other factors.

6. For the safety of PG&E personnel, contractors, customers and site-hosts, the COVID-19 crisis has required an unanticipated, necessary curtailment of EVCN in-person site-host and customer coordination and field construction work. As a result, PG&E anticipates EVCN work will continue into 2021, shifting the overall program target of 4,500 ports to 2021 or a later date.

Employees

2019 Result Legend: ■ = Target met or exceeded ■ = Target not met

Metric	2019 Target	2019 Result	2020 Target
Employee Engagement			
Employee Giving Campaign Pledges/Donations (participation rate)	49%	35%	35%
Employee Engagement Index ¹	68	64	68
Career Pathways			
Training Effectiveness ²	4.28	4.57	4.5
PowerPathway Graduates Hired Into Industry Jobs (percentage)	80%	93%	80%
Health and Wellness			
Workforce Unavailable Due To Health ³	7.7%	7.8%	7.7%

1. This figure represents the percentage of favorable responses to questions on an employee survey that measure employee engagement. In 2019, PG&E conducted a quarterly survey of employee engagement, sampling a portion of the employee population each time. The 2019 fourth quarter score was 64 percent, with 33 percent of employees participating in the survey and a margin of error of plus or minus 2 points. PG&E conducts a full employee survey every two years, to allow more time to execute on action plans to address issues identified in the prior survey; the next full employee survey will be in 2020.

2. This figure measures the effectiveness of PG&E's internal training program on a five-point scale through employee surveys on predictive data from employees on their ability to use training on the job.

3. This figure represents the percentage of full-time employees unavailable for work either due to long-term or short-term health reasons, as measured by total workdays lost for the entire year.

Environment

2019 Result Legend: ■ = Target met or exceeded ■ = Target not met

Metric	2019 Target	2019 Result	2020 Target
Compliance			
Agency Inspections Without A Written Enforcement Action	90%	91%	90%
Natural Resource Stewardship			
Land Conservation Commitment: (number of transactions closed) ¹	13	11	12
Clean Energy			
Renewables Portfolio Standard (RPS)	31% ²	30% ³ On track for multi-year compliance period requirement	33%
Supply Chain Sustainability			
Supplier Environmental Performance Standards ⁴	75%	62%	75%
Reducing Our Footprint			
Avoided Greenhouse-Gas Emissions (metric tons CO ₂)	220,000 ⁵	109,899 ⁵	260,000

1. Measures the number of transactions completed as part of our Land Conservation Commitment, through which PG&E is permanently protecting more than 140,000 acres through the donations of fee title and conservation easements on watershed lands to public agencies and qualified conservation organizations. In 2019, we completed 11 transactions, which was slightly below our target primarily due to PG&E's bankruptcy and weather-related conditions.

2. As defined in Senate Bill 1078, which created California's Renewables Portfolio Standard, and Senate Bill 1038, which modified the definition of "in-state renewable electricity generation technology," an eligible renewable resource includes geothermal facilities, hydroelectric facilities with a capacity rating of 30 MW or less, biomass and biogas, selected municipal solid waste facilities, photovoltaic, solar thermal, and wind facilities, ocean thermal, tidal current, and wave energy generation technologies. These figures are preliminary and will not be finalized until verified by the California Energy Commission.

3. California measures its RPS compliance using multi-year compliance periods. The 2017-2020 RPS Compliance Period is based upon eligible renewable deliveries over four years to achieve an average of 30 percent in the compliance period. Although PG&E is below the interim RPS target for 2019, there is no compliance requirement for specific deliveries in any individual year in a multi-year compliance period. The only compliance requirement is for the compliance period itself, and the company is well-positioned to meet its requirements for the 2017-2020 RPS Compliance Period.

4. Represents the percentage of top-tier suppliers that achieve a score of three or higher on a five-point scale relative to key elements of PG&E's Supplier Environmental Performance Standards. Scoring is based on suppliers' responses to an annual survey conducted by the Electric Utility Industry Sustainable Supply Chain Alliance. The target was not met due to increased requirements for suppliers to provide greater specificity on their environmental reduction targets. In response, PG&E is increasing efforts to educate suppliers on setting and reporting environmental reduction targets.

5. Represents the second year of Pacific Gas and Electric Company's voluntary goal to avoid one million tons of cumulative greenhouse emissions from 2018 through 2022, compared to a 2016 baseline. The goal, referred to as the "Million Ton Challenge," aims to reduce emissions from operations through energy-efficient and more sustainable facilities, continuing to deploy clean fleet vehicles, reducing methane emissions from natural gas operations, and adopting environmentally responsible products and services, with an initial focus on reducing the procurement of sulfur hexafluoride-containing electrical equipment. While we fell short of the 2019 target, we remain on track to meet the five-year goal.



Key Sustainability Indicators

114.9 miles

Miles of strength-tested gas transmission pipeline

426

Weather stations installed to monitor wildfire threat

At PG&E, we are moving forward with a number of structural, management and governance changes to improve operations, remove risk from our system, and ensure long-term accountability for sustained performance. We continue to work together with customers, regulators and community leaders to address the threat of wildfires and expand our wildfire safety programs. We are also recommitting to California's clean energy future by implementing and advocating for clean energy policy and investing in electrification.

Highlights

Invested \$7 billion to enhance and upgrade our infrastructure for safety, reliability and wildfire mitigation.

Met or exceeded goals for core elements of our 2019 Wildfire Mitigation Plan, including system hardening, vegetation management, enhanced inspections and situational awareness, such as fire detection and fire spread modeling capabilities based on an industry-leading satellite system.

Learned important lessons to improve our execution of Public Safety Power Shutoffs (PSPS) and began listening sessions with stakeholders to improve the program going forward with a goal of PSPS events that are smaller in size, shorter in length and smarter for our customers.

Completed substantial work to strengthen our natural gas system, achieving industry-leading gains in process safety, asset management and technology innovation.

Delivered some of the nation's cleanest electricity to customers, with nearly 30 percent coming from renewable sources and we remain on track to meet the state's 60 percent by 2030 renewable energy mandate.

Generated approximately 10.7 billion kWh of zero-carbon hydroelectric energy for the benefit of our customers.



PG&E Overview

PG&E Corporation is a holding company whose primary operating subsidiary is Pacific Gas and Electric Company, an investor-owned energy company that operates in Northern and Central California and delivers some of the nation’s cleanest energy. Throughout this report, when we refer to “PG&E,” we are discussing all of PG&E Corporation and its subsidiaries, including Pacific Gas and Electric Company. When we refer to the “Utility,” we are discussing Pacific Gas and Electric Company.

Headquarters Location	Service Area	Service Area Population
San Francisco, California	70,000 square miles in Northern and Central California	Nearly 16 million people

Based in San Francisco, PG&E delivers some of the nation’s cleanest energy to nearly 16 million people in Northern and Central California.



Customer Accounts (as of December 31, 2019)

5.5 million electric distribution accounts:

- 4.8 million residential
- 0.7 million commercial, industrial and other

4.5 million natural gas distribution accounts:

- 4.2 million residential
- 0.3 million commercial and industrial

Employees (as of December 31, 2019)

Approximately 23,000 regular employees

Approximately 15,000 employees are covered by collective bargaining agreements with three labor unions:

- International Brotherhood of Electrical Workers (IBEW), Local 1245, AFL-CIO

- Engineers and Scientists of California/ International Federation of Professional and Technical Engineers (ESC/IFPTE), Local 20, AFL-CIO and CLC
- Service Employees International Union (SEIU), Local 24/7

System

- 7,686 MW of PG&E-owned hydroelectric, nuclear, natural gas, solar and fuel cell generation
- Approximately 107,000 circuit miles of electric distribution lines (about 25 percent underground and 75 percent overhead) and approximately 18,000 circuit miles of electric transmission lines
- Approximately 43,000 miles of gas distribution pipelines, 6,600 miles of backbone and local gas transmission pipelines and three gas storage facilities

Net Operating Capacity Of Owned Generation Facilities¹

Facility	Net Operating Capacity (MW)
Fossil Fuel-Fired Plants	
Colusa Generating Station ²	657
Gateway Generating Station ²	580
Humboldt Bay Generating Station ²	163
Fuel Cell Facilities	3
Other Plants	
Diablo Canyon Power Plant ³	2,240
Hydroelectric Facilities	3,891
Solar Photovoltaic Facilities	152
Total	7,686

1. As of December 31, 2019

2. Natural gas power plant

3. Nuclear power plant

General Energy Production Statistics

	2017	2018	2019 ³
Total Electricity Generated (GWh net)¹	34,861	32,749	33,849
<i>Fossil Fuel-Fired Plants (GWh net)</i>	<i>5,712</i>	<i>6,332</i>	<i>6,321</i>
Colusa Generating Station (GWh net)	2,496	2,992	3,029
Gateway Generating Station (GWh net)	2,779	2,940	2,873
Humboldt Bay Generating Station (GWh net)	432	385	405
Fuel Cell Facilities (GWh net)	6	16	14
<i>Other Plants (GWh net)</i>			
Diablo Canyon Power Plant (GWh net)	17,951	18,297	16,195
Hydroelectric Facilities (GWh net)	10,900	7,814	11,051
Solar Photovoltaic Facilities (GWh net)	298	310	283
Electricity Purchased (GWh)	29,814	20,099	27,210
Retail Electricity Sales (GWh)²	61,397	48,832	35,956

1. Net of electricity used to operate plants. Data may not add up due to rounding.

2. Excludes sales to direct access and community choice customers, and sales to railroads and railways.

3. Data is based on metered generation as of May 1, 2020.

Natural Gas Throughput

	2017	2018	2019
Total Natural Gas Throughput (million cubic feet or MMcf)¹	800,923	881,279	866,897

1. Includes interdepartmental natural gas sales for the purpose of electric generation but excludes other interdepartmental natural gas sales.

System Investments

Approximately \$7 billion in capital investments in 2019 to enhance and upgrade PG&E's infrastructure for safety, reliability and wildfire mitigation.

Contribution to State and Local Revenues

PG&E is a major contributor to the revenue that state and local governments depend on to fund critical public services. In addition to property taxes, PG&E pays franchise fees to cities and counties for the right to use public streets for gas and electric facilities.

Franchise Fee And Property Tax Payments

	2017	2018	2019
Franchise Fees¹	\$165,488,047	\$160,040,020	\$170,960,278
Property Tax Payments²	\$461,832,527	\$520,137,440	\$509,466,117

1. Includes franchise fee surcharges and city franchise surcharges.

2. Property tax payments are based on a fiscal year (not calendar year).

Financial Performance

The financial information below is derived from PG&E Corporation's Consolidated Financial Statements at December 31, 2018 and December 31, 2019, unless otherwise indicated, which include the accounts of PG&E Corporation, the Utility and other wholly owned and controlled subsidiaries.

Financial Highlights¹
(unaudited, in millions, except share and per share amounts)

	2018	2019
Operating Revenues	\$16,759	\$17,129
Income (Loss) Attributable to Common Shareholders		
Non-GAAP core earnings ²	2,069	2,074
Non-core items ³	(8,920)	(9,730)
Reported Consolidated Income Attributable to Common Shareholders	(6,851)	(7,656)
Income Per Common Share, Diluted		
Non-GAAP core earnings ²	4.00	3.93
Non-core items ³	(17.25)	(18.43)
Reported Consolidated Net Earnings Per Common Share, Diluted	(13.25)	(14.50)
Dividends Declared Per Common Share⁴	0	0
Total Assets at December 31	\$76,995	\$85,196
Number of Common Shares Outstanding at December 31	520,338,710	529,236,741

1. This is a combined annual report of PG&E Corporation and the Utility. PG&E Corporation's Consolidated Financial Statements include the accounts of PG&E Corporation, the Utility, and subsidiaries, and have been prepared in accordance with Generally Accepted Accounting Principles ("GAAP"). All amounts presented in the table above are tax-adjusted at PG&E Corporation's statutory tax rate of 27.98%, except for certain Wildfire-related, Chapter 11-related, and 2019 GT&S capital disallowance costs, which are not tax deductible. Amounts may not sum due to rounding.

2. "Non-GAAP core earnings" is a non-GAAP financial measure and is calculated as income available for common shareholders less items non-core items. "Non-core items" include items that management does not consider representative of ongoing earnings and affect comparability of financial results between periods, consisting of the items listed in the table above. "Non-GAAP core EPS", also referred to as "non-GAAP core earnings per share", is a non-GAAP financial measure and is calculated as non-GAAP core earnings divided by common shares outstanding (diluted). PG&E Corporation and the Utility use non-GAAP core earnings and non-GAAP core EPS to understand and compare operating results across reporting periods for various purposes including internal budgeting and forecasting, short- and long-term operating planning, and employee incentive compensation. PG&E Corporation and the Utility believe that non-GAAP core earnings and non-GAAP core EPS provide additional insight into the underlying trends of the business, allowing for a better comparison against historical results and expectations for future performance. Non-GAAP core earnings and non-GAAP core EPS are not substitutes or alternatives for GAAP measures such as consolidated income available for common shareholders and may not be comparable to similarly titled measures used by other companies.

3. "Non-core Items" include items that management does not consider representative of ongoing earnings and affect comparability of financial results between periods, consisting of the items listed in the table below:

Year Ended December 31, 2019
(in millions, except per share amounts)

	Earnings		Earnings per Common Share (Diluted)	
	2019	2018	2019	2018
PG&E Corporation's Loss on a GAAP basis	\$(7,656)	\$(6,851)	\$(14.50)	\$(13.25)
Non-core items:				
Wildfire-related costs	8,761	8,914	16.59	17.24
Electric asset inspection costs	557	—	1.05	—
Locate and mark penalty	39	—	0.07	—
Chapter 11-related costs	180	—	0.34	—
2019 GT&S capital disallowance	193	—	0.37	—
Pipeline-related expenses	—	33	—	0.06
Reduction in gas-related capital disallowances	—	(27)	—	(0.05)
PG&E Corporation's Non-GAAP Core Earnings	\$2,074	\$2,069	\$3.93	\$4.00

For information about Non-core items in 2018 and 2019, see PG&E Corporation's and the Utility's annual reports on Form 10-K for the years ended December 31, 2018 and December 31, 2019, respectively.

4. The quarterly cash dividend on PG&E Corporation's common stock was suspended beginning with the fourth quarter of 2017.

For more information, see PG&E Corporation's and Pacific Gas and Electric Company's 2019 Joint Annual Report to Shareholders or Annual Report on Form 10-K for year ended December 31, 2019, which have been filed with the U.S. Securities and Exchange Commission.



Ethics and Compliance

With our Mission, Vision and Culture as the foundation, our Code of Conduct identifies the expectations and requirements for which employees are accountable. In that spirit, PG&E promotes a culture in which employees are encouraged to speak up and empowered to meet the standards laid out in our Code of Conduct at all times.

Our Approach

Business-Wide

Within senior leadership, the companies' Chief Ethics and Compliance Officer (CECO) leads compliance and ethics. The CECO reports to the PG&E Corporation Chief Executive Officer (CEO) and President and has additional reporting responsibility to the Audit Committees of the PG&E Corporation and Pacific Gas and Electric Company Boards of Directors and the Compliance and Public Policy Committee of the PG&E Corporation Board.

The CECO is responsible for:

- Building a best-in-class compliance and ethics program and managing its implementation,
- Overseeing enterprise-wide programs for compliance monitoring, reporting, assessment and remediation,
- Strengthening ethics-and compliance-related training,
- Reinforcing PG&E's compliance and ethics culture,
- Identifying areas of compliance and ethics risk,
- Managing a library of policies and procedures,
- Developing action plans to prevent, detect and correct risks and issues, and
- Supporting the federal monitorship and probation arising out of Pacific Gas and Electric Company's San Bruno criminal conviction.

During 2019, we integrated culture and ethics into strategic planning discussions with PG&E's senior executives from every line of business in order to consider how PG&E's culture impacts risk and compliance work. During line of business Risk and Compliance Committee meetings, we focus on the impact of behavior on compliance performance as issues arise.

Beginning in 2016, we developed and implemented a standardized framework called the Compliance and Ethics Maturity Model, which includes eight elements derived from the U.S. Federal Sentencing Guidelines that define the parameters of an effective compliance and ethics program. To assess and monitor the compliance and ethics program for each line of business, we completed an initial baseline assessment of each line-of-business program in 2016 and established maturity level targets across PG&E.

Throughout 2019, PG&E's Compliance and Ethics organization supported the lines of business in advancing their own programs' maturity, while concurrently seeking to advance its own program. Advancements include documenting and testing controls, developing training and communications programs, performing compliance investigations, and promoting adherence to the Code of Conduct.

Management-level governance bodies help drive and coordinate our compliance and ethics activities:

- **Compliance and Ethics Committee:** Made up of officers, this committee provides leadership, strategic guidance and oversight of PG&E's compliance and ethics program. It works to promote an organizational culture committed to integrity, ethical conduct and compliance with all applicable laws, regulations and PG&E requirements.
- **Compliance and Ethics Leadership Team:** This cross-functional team of non-officer compliance and ethics leaders within PG&E is accountable for promoting the effectiveness of PG&E's compliance and ethics program by coordinating across the lines of business on strategy, goals and programs, as well as sharing best practices.
- **Risk and Compliance Committee in each line of business:** This committee includes the line-of-business officer and senior leaders, and provides leadership, strategic guidance and oversight for each line of business' compliance and ethics program and works to promote compliance with all laws and regulatory requirements, as well as maintain focus on operational risk management and ethics.
- **Ethics Council:** We maintain an Ethics Council, which includes management and union-represented employees at multiple levels. The Council meets five times throughout the year, including one meeting that is open to all employees, and helps raise and address issues relating to ethics and conduct at PG&E.

To provide guidance on conduct requirements, PG&E maintains codes of conduct for the following:

- Employees
- Boards of Directors
- Contractors, Consultants and Suppliers

Boards of Directors

Certain PG&E Corporation and Pacific Gas and Electric Company Board committees have specific oversight responsibility for compliance management in their respective substantive areas:

Entity	Risk Oversight Responsibilities
Compliance and Public Policy Committee ¹	<ul style="list-style-type: none">▪ Coordinates the compliance-related oversight of the various committees of the Boards, including:<ul style="list-style-type: none">• The companies' compliance and ethics program,• Compliance with laws, regulations and internal policies and standards, and• Internal or external compliance reviews or audits▪ Oversees public policy, sustainability and corporate responsibility issues that could affect customers, shareholders or employees▪ Oversees compliance with the Wildlife Safety Plan
Audit Committees	<ul style="list-style-type: none">▪ Oversee and monitor compliance with legal and regulatory requirements, in concert with other Board committees
Safety and Nuclear Oversight Committees	<ul style="list-style-type: none">▪ Oversee matters relating to safety, operational performance and compliance issues related to Pacific Gas and Electric Company's nuclear, generation, gas and electric transmission, and gas and electric distribution operations and facilities

1. Committees of the PG&E Corporation Board of Directors only.

For a full description of Board committee oversight responsibilities, please see the webpages of the Boards of Directors of PG&E Corporation and Pacific Gas and Electric Company, as well as our 2019 Joint Proxy Statement.

Lines of Business

Each of PG&E's lines of business has employees who are responsible for implementing the line of business' compliance and ethics programs. Each of these programs is overseen by the respective senior officer for the line of business.

2019 Milestones

In 2019, PG&E maintained its focus on safety and these objectives in a number of ways. Highlights included the following:

- **Communications related to culture and the Code of Conduct.** We focused on updating and enhancing our Code of Conduct communications and associated training. We also worked to strengthen our “speak up, listen up, and follow up” culture, which aims to create a work environment where everyone feels safe to speak up about safety, misconduct and new ideas—and where everyone is confident that those concerns will be heard and taken seriously.
- **Remediated causes of Notices of Violation (NOVs) and Non-Conformances (NCs).** We partnered with our lines of business to develop plans to remediate the causes of their NOVs and NCs (i.e., self-identified instances of non-compliance for which no regulator has yet to issue a NOV). Senior leaders review the status of this work and report out semiannually at the joint meetings of the Audit, Compliance and Public Policy, and Safety and Nuclear Oversight Committees of the Boards.
- **Advanced overall compliance and ethics program maturity.** We continued to strengthen enterprise-wide compliance and ethics program maturity through an increased focus on compliance controls and by improving management of cross-functional compliance work.
- **Enhanced employee outreach.** We launched our Reach Every Employee program, which offers every employee the opportunity to speak up about safety concerns, identify potential misconduct issues and share new ideas. Every supervisor is accountable to follow up on the issues and ideas raised by their employees. We introduced a survey that yielded important feedback. In 2019, 99.9 percent of employees completed these conversations.
- **Implemented enhanced training, process improvements and expanded reporting capabilities for the employee conduct program.** We continued to improve our employee conduct program, which manages our standards, policies and processes to address potential employee misconduct. We completed these actions to promote greater transparency, fairness and consistency in the program.

Measuring Progress



Driving culture change across PG&E

We continue to promote our “speak up, listen up, follow up” effort, with the primary goal of creating an environment in which all employees feel safe to speak up—particularly about safety concerns and potential misconduct. This includes:

- Presenting annual Speak Up Awards, which honor employees who had the courage to speak up about an issue or concern, resulting in a positive impact on PG&E, our customers or culture. Nine employees received recognition in 2019, and we received almost double the award nominations from the prior year.
- Holding PG&E’s fifth annual Compliance and Ethics Week with a focus on integrity and our work.
- Continuing the Reach Every Employee program to uncover safety issues.
- Holding Town Hall meetings to foster ongoing dialogue.

Photo taken 2019

In 2019, PG&E’s compliance and ethics training focused on speaking up. The annual all-employee training is comprised of video vignettes based on real-world issues that employees might face. It emphasizes the importance of ethical decision-making.

In addition to annual compliance and ethics training, we require all employees to complete Code of Conduct training annually and certify that they have read, understand and will comply with our Employee Code of Conduct.

Compliance And Conduct Training¹

	2016	2017	2018	2019
Compliance and Ethics Training	99.4%	99.9%	99.9%	99.9%
Code of Conduct Training	99.8%	99.9%	99.9%	99.9%

1. For a variety of reasons, a statistically small number of PG&E’s employees are unable to attend a training session in any given calendar year.

The volume of calls to PG&E’s Compliance and Ethics Helpline in 2019 was approximately 3.2 calls per 100 employees. That volume was notably higher than the global benchmark of 1.4 calls per 100 employees reported by NAVEX Global. The total call volume increased 10 percent over the prior year, but with a substantial decrease in calls requesting guidance.



Risk Management

Nothing is more important to PG&E than the safety of our customers, workforce and the public. In keeping with this focus, we strive to embed risk management in every critical business process, making data-driven decisions to support safe, reliable and affordable electric and gas service.

Our Approach

At PG&E, risk management processes are facilitated by a central group, implemented by each line of business and overseen by senior management and the Boards of Directors.

The Vice President, Internal Audit and Chief Risk Officer (CRO) of PG&E Corporation and Pacific Gas and Electric Company is responsible for overseeing the enterprise and operational risk management program, internal audit and insurance functions, market and credit risk management, third-party risk management, and Sarbanes-Oxley Act compliance reporting jointly to the Executive Vice President and Chief Financial Officer and the Audit Committees of the PG&E Corporation and Pacific Gas and Electric Company Boards.

Under PG&E's Chapter 11 Plan of Reorganization, PG&E committed to establishing a newly expanded role of Chief Risk Officer who will have oversight of risks associated with PG&E's operations, emphasizing the role of risk management in operational decisions.

With guidance from a central program office, PG&E maintains a risk register of event-based risks and line-of-business risks. To manage risks, we follow a consistent enterprise-wide approach to model, measure and reduce risk. With our methodology, PG&E is able to calculate a baseline risk score and evaluate different mitigation strategies for their ability to reduce that baseline score. The methodology places an emphasis on identifying and prioritizing the highest safety risks. Risk mitigations are tracked throughout the year and risk assessments are refreshed at least annually to capture the impact of mitigation strategies and to reflect changes in the operating environment. The risk management program provides transparency and accountability for risk reduction progress.

The senior-most executive of each line of business maintains a Risk and Compliance Committee, which has oversight responsibility for all associated activities for risk and compliance programs within their organization. The Risk and Compliance Committee ensures that activities related to enterprise and operational risk and compliance management within their respective organizations are adequate and effective, and that resources are available as needed.

In addition, the PG&E Corporation and Pacific Gas and Electric Company Boards and their respective committees have specific oversight responsibility for risk management in their respective areas:

Entity	Risk Oversight Responsibilities
Boards	<ul style="list-style-type: none"> ▪ Evaluate risks associated with major investments and strategic initiatives (with assistance from the Finance Committee¹)
Audit Committees	<ul style="list-style-type: none"> ▪ Discuss the guidelines and policies that govern the processes for assessing and managing major risks ▪ Allocate to other Board committees the specific responsibility to oversee identified enterprise risks ▪ Consider risk issues associated with overall financial reporting and disclosure processes ▪ Discuss programs to monitor compliance with laws, regulations, policies and programs
Finance Committee ¹	<ul style="list-style-type: none"> ▪ Discusses risk exposures related to energy procurement, including energy commodities and derivatives, and other enterprise risks, as assigned by the Audit Committees
Safety and Nuclear Oversight Committees ¹	<ul style="list-style-type: none"> ▪ Advise and assist the Boards of Directors with respect to the oversight and review of risk management practices related to Pacific Gas and Electric Company's nuclear, generation, gas and electric transmission, and gas and electric distribution operations and facilities ▪ Oversee other enterprise risks, as assigned by the Audit Committees
Compensation Committee ¹	<ul style="list-style-type: none"> ▪ Oversees potential risks arising from compensation policies and practices

1. Committees of the PG&E Corporation Board of Directors only.

For a full description of Board committee oversight responsibilities, please see the webpages of the Boards of Directors of PG&E Corporation and Pacific Gas and Electric Company, as well as our 2019 Joint Proxy Statement.

Senior management and their committees have specific oversight responsibility for risk management in their respective areas:

Entity	Risk Oversight Responsibilities
Enterprise Risk Committee	<ul style="list-style-type: none"> ▪ Provides strategic direction and oversight of PG&E's enterprise and operational risk management program
Enterprise Compliance Governance Committee	<ul style="list-style-type: none"> ▪ Provides strategic direction and oversight of PG&E's compliance and ethics programs

2019 Milestones

In 2018, the Safety Model Assessment Proceeding (S-MAP) at the California Public Utilities Commission (CPUC) established a common enterprise risk framework for California's investor-owned utilities. As a result, PG&E implemented a new risk framework in 2019, which included developing a multi-attribute value function to combine different risk consequences (safety, reliability, and financial) into a single risk score. Using the new framework, PG&E quantified the risks on our risk register and began risk and mitigation analysis for our 2020 Risk Assessment Mitigation Phase (RAMP) filing, due in June 2020.

In 2019, the CPUC also issued a decision in the S-MAP proceeding on metrics and reporting. During the year, PG&E participated in several workshops to refine and propose new metrics, which will enable the CPUC and utilities to better measure and understand operational risk.

In the spirit of continuous improvement, PG&E continues to enhance its risk models based on lessons learned in both the CPUC's RAMP and S-MAP proceedings.



Electric Operations

We continue to enhance and strengthen our infrastructure, including making substantial investments to upgrade the energy grid and our operations. Doing so is central to our mission to provide safe and reliable energy—and to addressing the continued impacts of climate change, including more extreme weather events.

We understand that we have much work to do in this area, which is why we are taking decisive action to repair or replace aging electric assets and implement enhanced and additional safety precautions to further reduce wildfire risks and help keep the customers and communities we serve safe.

As part of our multiyear plan, PG&E continues to build a smarter grid designed to incorporate new energy technologies as they are introduced and to give our customers increased flexibility, choice and value. This integrated grid platform also gives PG&E greater visibility to improve operational effectiveness and to more effectively integrate renewable energy with conventional sources.

Our Approach

Prolonged periods of high temperatures, extreme dryness and record-high winds have created conditions in our state where any spark could cause a catastrophic wildfire. Our climate continues to change: in less than a decade, the area served by PG&E that the CPUC has designated to be at a high risk of wildfire has increased from 15 to 52 percent—an increase of more than 300 percent.

We are committed to working together—PG&E, our government and all Californians—to adapt our electric system to the growing threat of wildfires, while also helping our customers prepare for service interruptions under our Public Safety Power Shutoff (PSPS) program. We have a comprehensive plan for reducing wildfire risks which includes new grid technology, a critical hardening of the electric system, enhanced vegetation management and more, with short-, medium- and long-term plans to make our system safer.

We know how much our customers rely on electric service and want to work together to share information and help them prepare for and stay safe during outages related to severe weather events. We are listening and incorporating feedback from our customers, local, state and tribal officials and wildfire safety experts as we prioritize and implement wildfire safety work.

Our Community Wildfire Safety Program includes immediate and comprehensive actions to upgrade our infrastructure, monitor fire threats in real time and institute new wildfire safety measures.

- We're installing real-time monitoring and situational awareness tools so we can better understand how severe weather can impact our system and proactively respond to potential threats.
- We're taking new and enhanced safety measures to minimize wildfire threats and keep our customers and communities safe by:
 - Meeting and exceeding state vegetation and fire safety standards
 - Continuing to accelerate inspections of our electric infrastructure in high fire-risk areas
 - Improving our PSPS program to make shutoffs shorter in duration, smaller in size and smarter in performance for our customers
- We're hardening our system and improving resiliency to reduce the need for PSPS events by:
 - Strengthening our infrastructure with stronger poles, covered power lines and targeted undergrounding
 - Installing sectionalizing devices to more quickly and efficiently isolate impacted communities
 - Establishing new microgrids to allow PG&E to provide electricity to thousands of customers and central community resources serving local customers during a PSPS event



PG&E introduces wildfire monitoring using satellite technology

After several years of testing and development, the PG&E Satellite Fire Detection and Alerting System became fully operational in June 2019. This state-of-the-science program incorporates data from two new GOES satellites, as well as three polar orbiting satellites, to provide PG&E with advanced warning 24/7 of potential new fire incidents. The satellites are operated by the U.S. National Oceanic and Atmospheric Administration's National Environmental Satellite, Data, and Information Service division.

PG&E's meteorology team led the development of the program in collaboration with experts in the satellite fire detection field from the University of Wisconsin–Madison Space Science and Engineering Center (SSEC). Working with the SSEC, PG&E developed a dedicated and proprietary data pipeline that provides fire detection data as fast as every minute. An internal web application allows staff at PG&E's Wildfire Safety Operations Center to track fire progression as well as the intensity of fires in near real time. The system also generates new fire alerts via email and on an app.

2019 Milestones

In 2019, as part of our commitment to safety, many of PG&E's efforts focused on additional measures intended to further reduce wildfire threats.

Here is some of what was achieved in 2019:

- **Cleared thousands of miles via Enhanced Vegetation Management work:** Work to keep trees away from power lines continued as PG&E crews and contractors pruned or removed trees with a higher potential for wildfire risk along approximately 2,498 miles of distribution lines, topping the goal of 2,455 miles.
- **Made the electric system stronger and more resilient:** We installed stronger and more resilient poles and covered power lines on 171 circuit miles, 21 more miles than the goal of 150 miles. Over the next 12 to 14 years, approximately 7,100 miles will be hardened in high fire-threat areas.
- **Added new technology to our Wildfire Safety Operations Center, the 24/7 command center for PG&E's wildfire monitoring and response:** The center, based in PG&E's San Francisco headquarters, received technological and facility upgrades in 2019 that included a tool that enables better coordination and communication with field personnel and the addition of using satellites for spotting fire starts.
- **Completed unprecedented wildfire safety inspections:** We completed 100 percent of visual inspections and aerial inspections of nearly 50,000 transmission structures as well as visual inspections of nearly 700,000 distribution poles and 222 substations in high fire-risk areas. All of the more than 1,100 highest safety risk issues found through these inspections have been repaired or resolved.
- **Installed hundreds more weather stations, which provide hyper-local information and increased situational awareness:** We installed 426 weather stations, 26 more than the goal of 400. By 2022, there will be 1,300 weather stations in operation.
- **Turned on more high-definition cameras, an effective tool for early spotting of wildfires and monitoring real-time conditions:** We installed 133 high-definition cameras, 37 cameras above the goal for the year. By 2022, 600 cameras will be in operation.

Public Safety Power Shutoffs:

We also initiated and improved Public Safety Power Shutoffs. For public safety, it is sometimes necessary for PG&E to turn off electricity when gusty winds and dry conditions, combined with a heightened fire risk, are forecasted. PG&E executed this safety measure nine times in 2019. We continue to work, internally and in conjunction with stakeholders, to improve the PSPS program going forward with a goal of PSPS events that affect fewer customers and are of shorter duration.

We safely readied and operated four temporary microgrids to energize more than 4,800 customers during the October and November 2019 PSPS events in portions of Angwin, Calistoga, Grass Valley and Placerville. The temporary microgrid in Angwin featured a pre-installed interconnection hub designed to enable the rapid and efficient connection of temporary generation when PSPS events are forecasted. The three other sites were enabled by temporary generation sited and connected within PG&E substations.

Measuring Progress

The average time a PG&E customer was without power (SAIDI) was 148.8 customer-minutes, and the average number of power interruptions per customer (SAIFI) was 1.129, or just more than one outage per customer per year. Both results fell short of our target, largely due to weather and significant storms and heat waves at different points during the year. (PG&E's PSPS events were not included in the 2019 reliability metrics.)

Electric Reliability Progress¹

	2019 Target	2019 Actual
Average duration of outages per customer in minutes (SAIDI)	129.2	148.8
Average number of outages per customer (SAIFI)	1.089	1.129

1. PG&E's PSPS events exceeded our Major Event Day threshold and have been classified as excludable and were thus not included in the 2019 reliability metrics. Any future PSPS events are likely to exceed our Major Event Day threshold and be excluded; however, it is possible that we could have a smaller, more localized PSPS event that does not qualify as an excludable event and would be included in these reliability metrics.

PG&E also tracks the number of customers who experience five or more sustained outages (CEMI-5), measured as a percentage of the total customers served, as well as the percentage of time that PG&E personnel are on site within 60 minutes after receiving a 911 call of a potential PG&E electric hazard. The increase for CEMI-5 in 2019 was largely driven by many storms throughout the year.

Electric System Progress

	2014	2015	2016	2017	2018	2019
Customers experiencing five or more sustained outages (CEMI-5)	1.71%	1.35%	2.10%	1.81%	2.61%	3.20%
Electric Emergency Response (percentage within 60 minutes)	94.1%	97.1%	98.3%	96.6%	97.9%	95.3%

PG&E and other energy companies use standard measures for electric reliability:

- System Average Interruption Duration Index (SAIDI) is the amount of time the average customer experiences a sustained outage (being without power for more than five minutes) in a given year.
- System Average Interruption Frequency Index (SAIFI) is the number of times the average customer experiences a sustained outage in a given year.



Gas Operations

At PG&E, we are dedicated to becoming the safest, most reliable gas operator in the country. We continue to upgrade our pipeline system and pioneer new gas leak detection technologies. We also maintain several international certifications for asset management and pipeline safety as we work to strengthen our operational performance.

PG&E strongly supports California's climate and clean air goals, and our natural gas system has a role to play in decarbonization to help California achieve its goals at a reasonable cost. We also welcome the opportunity to avoid investments in new gas assets that might later prove underutilized as local governments and the state work together to realize long-term decarbonization objectives.

Our Approach

As the owner and operator of one of the largest natural gas systems in the United States, PG&E is responsible for an integrated transmission, storage and distribution system that consists of approximately 43,300 miles of distribution pipeline (as well as additional mileage associated with individual gas services), 6,600 miles of backbone and local transmission pipeline and three gas storage facilities. The system also includes eight natural gas compressor stations, which receive and move natural gas through our pipeline network.

Our focus remains on maintaining and operating this system safely and reliably, with public and workforce safety as the single most important driver of our work. While we have made progress in key safety areas, we realize there is more to do to demonstrate our commitment and progress toward gas safety excellence.

To verify that progress, we benchmark against other leading companies and seek third-party certification, which requires an extensive audit process led by Lloyds Register. In addition, our safety management system provides the structure to systematically manage and maintain operational excellence in asset management, safety culture, and process safety, with a commitment to continuous improvement and in compliance with best-in-class industry standards.



Meeting Industry Standards for Gas Operations Safety

PG&E strives for continuous improvement, and validation from third-party experts demonstrates that we are making progress towards our safety goals.

Pacific Gas and Electric Company achieved the following in 2019:

- Received confirmation from Lloyd's Register of our continued certification to two of the highest internationally recognized asset management certifications—the International Organization for Standardization (ISO) 55001 and Publicly Available Specification (PAS) 55-1.
- Received confirmation from Lloyd's Register of our continued compliance with the industry standard on pipeline safety management systems, the American Petroleum Institute Recommended Practice (API RP) 1173.
- Certified as compliant with API RP 754, Process Safety Performance Indicators.

Photo taken 2019

2019 Milestones

Gas Transmission System

PG&E continues to invest in the safety and reliability of our gas transmission pipeline system. From 2011 to 2019, PG&E has achieved the following results:

- Validated safe operating pressure by strength-testing 1,495 miles of gas pipeline.
- Replaced 269 miles of gas transmission pipeline.
- Automated 360 valves, enabling automatic or remote-control shutoff of gas in an emergency.
- Retrofitted 1,316 miles of gas transmission lines to accommodate in-line inspection tools, or “smart pigs,” which are used to inspect the condition of pipelines using sophisticated technology.

Gas Distribution System

We continue to improve the safety and reliability of PG&E's gas distribution system through enhancements to leak response and repair, the deployment of new tools and technologies, and an overhaul of our approach to records and information management.

PG&E uses a diverse array of state-of-the-art tools to survey and inspect our gas infrastructure by air, land and water. Crews use handheld devices, aircraft equipped with LiDAR technology, leak-detecting cars, boats and all-terrain-vehicles to help identify leaks and make repairs when needed.

We use the Picarro Surveyor™ as a detection vehicle, which is one of the most sensitive methane-detection technologies available, measuring methane in parts per billion. Since 2014, PG&E's Picarro gas leak survey vehicles have enabled us to quickly identify leaks and prioritize them for repair.

Other highlights from 2019 include:

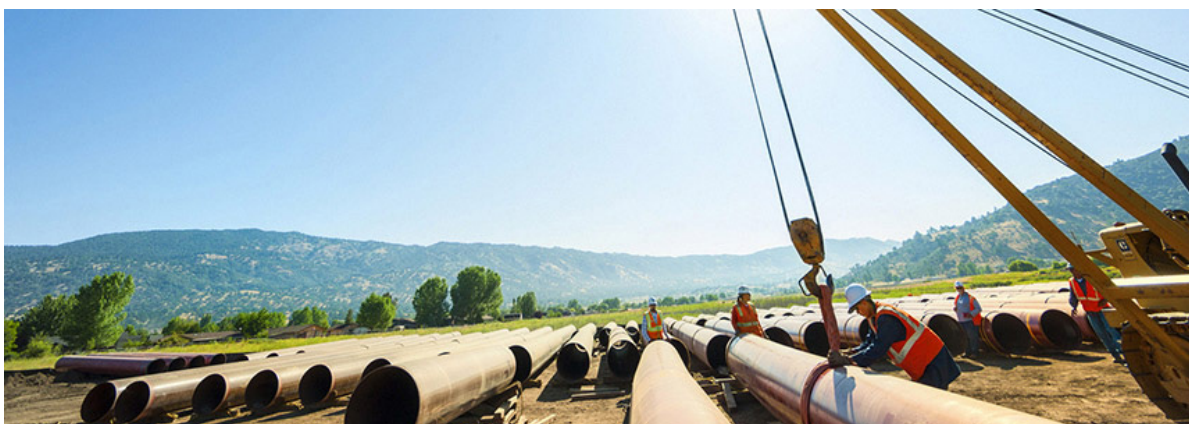
- Reducing the duration of open minor non-hazardous workable leaks to 96 days, exceeding our target of 150 days.
- Responding to gas odor reports in an average of just over 20 minutes.
- Replacing 863 miles of gas main.

PG&E is also improving the quality of, and access to, our gas distribution records by using a Geographical Information System (GIS). This system allows PG&E to more comprehensively map, reconcile and analyze data associated with our distribution assets. In addition, our Enterprise Records and Information Management program focuses on the deployment of consistent, integrated processes that support records development associated with operational safety, regulatory compliance and knowledge management.

Embedding Public Safety into our Operating System

PG&E has incorporated numerous public safety measures into our operational goals and plans. Examples include:

- **Installed 360 automatic and remote shutoff valves during the 2011 to 2019 timeframe.** Among the critical investments we've made to enhance the safety of our gas infrastructure, automatic and remote shutoff valves on our transmission pipelines quickly turn off gas in case of emergencies or natural disasters.
- **Installed 2,907 SCADA visibility and control points** on the gas transmission system and **4,314 SCADA visibility and control points** on the gas distribution system to monitor pressure and flow.
- **Became certified as compliant with the American Petroleum Institute Recommended Practice (API RP) 754** for Process Safety Performance Indicators.



California's Gas System in Transition

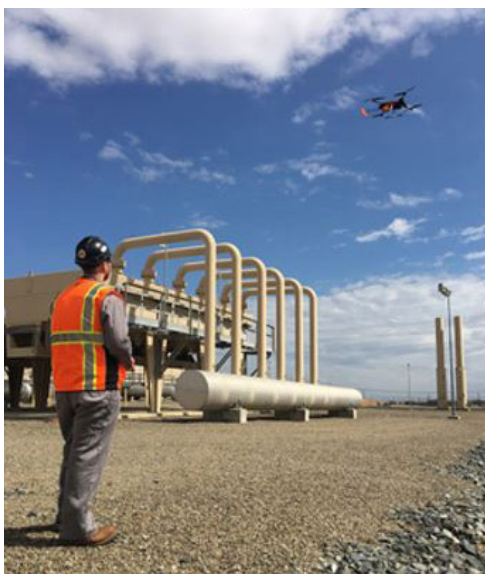
PG&E is taking steps to align its gas business with California's decarbonization and carbon neutrality goals. This includes participating in a stakeholder process on California's Gas System in Transition facilitated by Gridworks.

In 2019, phase 1 of this initiative identified a long-term trend towards decreased natural gas throughput, as well as an increase in capital and ongoing maintenance costs of the gas delivery system. If unmanaged, the result of these trends could, "lead directly to higher rates and potentially higher gas bills for those who continue to use gas if the gas delivery system footprint remains static."

Alongside utility, labor, ratepayer advocate, and social and environmental non-profit stakeholders, PG&E is continuing to participate in phase 2 of the Gridworks initiative. This phase aims to develop a "how to" manual for state agencies on integrated long-term gas planning and provide guidance to the CPUC to inform its gas system planning Order Instituting Rulemaking (OIR). This phase is expected to identify forecasting, data, and legal and policy barriers needed to develop a long-term, integrated gas planning framework that avoids and/or defers costs, promotes equity, ensures a just transition for gas workers, and maintains a financially viable gas utility.

Based on the results of Phase 2, Gridworks is expected to turn their attention next year to developing policies and piloting solutions related to workforce management, community engagement, and financial issues.

Photo taken 2017



Reducing Methane Emissions for the Million Ton Challenge

As part of our Million Ton Challenge, PG&E took steps last year to reduce methane emissions using a variety of innovative techniques that were also implemented to meet regulations from the California Public Utilities Commission and the California Air Resources Board. The Million Ton Challenge is a five-year initiative to reduce one million tons of greenhouse gas emissions from our operations.

We completed 100 percent of our “Super Emitter” annual leak surveys of the distribution system and increased leak survey and repair at gas storage and compressor stations, demonstrating a reduction of found leaks. We also continued our gas distribution system accelerated leak survey and repair work for vintage plastic and steel pipes.

We used a variety of technologies, including drones, to detect leaks in areas that are difficult to reach on foot. We also replaced 126 miles of vintage gas distribution pipeline, as well as gas-driven regulators at our storage, compressor and regulation stations.

We also implemented drafting, cross compression and project bundling to reduce the amount of natural gas released to the atmosphere during construction and repair projects on our gas transmission system. Drafting reduces the pressure to the lowest level possible before beginning work, while cross compressions re-injects the natural gas into a nearby pipeline. Both are used to transfer and reduce the amount of natural gas from the part of the system where we are performing work, rather than blowing the gas to the atmosphere.

Beyond implementing emission reduction strategies, part of the challenge is arriving at methods to measure the reductions. We began testing a second generation high sensitivity methane detector prototype from RKL instruments and also worked with the research consortium NYSEARCH on a 2020 project to develop a methodology for classifying regulator station emissions.

And in 2020, we began implementing a new bubble size classification process for above-ground assets, primarily for meter sets—allowing us to estimate our meter set emissions and focus repairs on the highest emitting equipment.

Measuring Progress

PG&E has met 11 of the 12 safety recommendations from the National Transportation Safety Board (NTSB) report on the San Bruno accident. We are focused on safely and responsibly completing the final recommendation, which includes strength-testing natural gas transmission lines. It is currently in “open-acceptable response” status, indicating that the NTSB regards PG&E’s progress as appropriate and acceptable. Our gas system progress is detailed in the table below.

Gas System Progress

	2010	2019
Gas Odor Response Times		
Average response time in minutes	33.3	20.8
Percent response within 60 minutes	94.4%	99.6%
SCADA¹ Visibility and Control Points		
Transmission pressures and flows	1,300	2,907
Transmission control points	870	1,953
Distribution pressures and flows	290	4,314
Leak Backlog		
Grade 2 open leak average duration ² (Target: 150 days)	N/A	96 days
Dig-In Reduction		
Excavation damage per 1,000 excavation tickets	3.5	1.04
	2010	2011–2019
Gas Transmission		
Miles of pipeline replaced	9	>269
Miles of pipeline strength tested	0	>1,495
Miles of pipeline made piggable	130	>1,316
Automated valves installed	0	360
Gas Distribution		
Miles of main replaced ³	27	>863

1. Supervisory control and data acquisition.

2. Grade 2 leaks are non-hazardous.

3. In 2014, all known remaining cast-iron pipe was decommissioned.



PG&E’s Support for Biomethane

PG&E maintains a diverse energy portfolio to meet customer needs and is working to add biomethane, a 100 percent renewable energy resource, to the gas pipeline system in a way that is both safe and helps California address climate change.

Biomethane is a renewable energy resource which is produced from organic matter like agricultural crops, forestry waste, wooden construction waste and manure. Major sources of biomethane are dairies, non-hazardous landfills, wastewater treatment plants and other organic sources.

PG&E is in the process of interconnecting seven renewable natural gas projects, with the first few expected to begin injecting pipeline quality gas by the end of 2020. In total, the seven projects are expected to provide roughly 16.5 million cubic feet of gas per day. Two projects are the result of the state’s SB 1383 Dairy Pilot Program, designed to demonstrate the collection of biomethane from dairy digesters and its injection into natural gas pipelines.



Renewable Energy

PG&E remains committed to meeting California's evolving clean energy policies and standards, which we are working to achieve by delivering some of the nation's cleanest energy, reducing our greenhouse gas emissions, and providing safe and reliable energy, all while working to keep service affordable for customers.

Clean energy plays a foundational role in the transition to a decarbonized economy, and PG&E strongly supports California's clean energy policies, renewable goals and efforts to limit and adapt to climate change. These policies and investments have created a robust renewable energy market in California and have contributed to substantial greenhouse gas emissions reductions from the electric sector.

Our Approach

Approved in 2003, California's Energy Action Plan establishes a "loading order" that prioritizes energy efficiency, demand response and renewable energy over using fossil fuels to meet customer demand.

In September 2018, SB 100 was signed into law, increasing California's Renewables Portfolio Standard (RPS) target to 60 percent by December 31, 2030, and establishing a new statute that sets a policy of meeting 100 percent of retail sales from eligible renewables or zero-carbon resources by December 31, 2045. Additionally, a state Executive Order directs all sectors of the California economy to achieve carbon neutrality by 2045 and to be net greenhouse gas negative thereafter. PG&E is committed to meeting California's vision for a sustainable energy future in a reliable and cost-effective manner for customers.

In recent years, the dynamics of California's energy landscape have changed, highlighted by the expansion of retail customer choice and the growth of distributed generation, such as private rooftop solar. These dynamics have affected PG&E's renewables portfolio, allowing us to shift from a focus on incremental procurement to now managing and optimizing our existing portfolio, including through the sales of excess renewable energy. This ultimately influences our end-of-year RPS position.

Reflecting California's changing energy landscape, the CPUC approved in 2018 several key elements of a joint proposal with labor and environmental organizations that would phase out PG&E's production of nuclear power in California by 2025 while still meeting California's greenhouse gas reduction goals.



Renewable Energy Progress

The majority of our renewable resources come from contracts with third-party renewable energy companies. As of April 2020, PG&E's RPS-eligible portfolio included 245 contracts for more than 6,600 MW of contracted capacity. PG&E also has 52 utility-owned RPS-eligible generation facilities representing more than 450 MW of additional capacity.

In 2019, 12 California projects under contract began delivering renewable energy to PG&E customers, including:

- **California Flats Solar Project:** a 150-MW solar photovoltaic project with Capital Dynamics, Inc. in Monterey County
- **RE Astoria:** a 100-MW Solar Photovoltaic with Recurrent Energy, LLC in Kern county
- **Cuyama Solar Array:** a 40-MW solar photovoltaic project with D. E. Shaw & Co., L.P in Santa Barbara County
- **Lost Hills Solar:** a 20-MW solar photovoltaic project with Southern Power Co. in Kern County

PG&E executed seven small bioenergy projects under 20 MW in 2019.

RPS Resources—As of April 2020¹

RPS-Eligible Active Contracts¹

Type	Number of Contracts	MW
Bioenergy	40	296
Geothermal	3	272
Small Hydroelectric	65	203
Solar Photovoltaic (PV)	112	3,395
Solar Thermal	4	741
Wind	21	1,780
Total RPS Contracts	245	6,685

RPS-Eligible Utility-Owned Generation (UOG)

Type	Number of Units	MW
Small Hydroelectric	38	301
Solar PV	13	152
Total RPS UOG	51	453

1. Includes new RPS procurement through the RPS, RAM, RAM for PV Program, PV Request for Offers, Qualified Facilities, Renewable Energy Market Adjusting Tariff (ReMAT), Bioenergy Market Adjusting Tariff (BioMAT), and Renewable Energy Credit transactions.

Photo: Tyler Medel

Measuring Progress

In 2019, nearly 30 percent of our delivered electricity came from RPS-eligible sources, including solar, wind, geothermal, small hydroelectric, and various forms of bioenergy. We continue to deliver some of the nation's cleanest energy, and we are well on our way to meet the state's 60 percent by 2030 renewable energy mandate.

California measures a retail seller's RPS compliance using multi-year compliance periods. While PG&E's renewable energy percentage decreased in 2019, we are well-positioned to meet our RPS compliance requirements for the current compliance period. Our RPS percentage was lower in 2019 because we sold surplus RPS energy, which reduces the costs of the RPS portfolio. PG&E passes these savings through to our customers.

The chart below shows our overall electricity supply mix for 2019, which included the energy that PG&E generated, energy that PG&E purchased from third parties on behalf of customers, and energy that PG&E sold back into wholesale markets.

For 2019, PG&E is reporting our electricity generated and procured as a percent of retail sales using two different methodologies: one depicting actual procurement and the other using the method required by the California Energy Commission (CEC) for the Power Content Label.

PG&E's 2019 Electric Power Mix Delivered to Retail Customers¹

	Percent of Bundled Retail Sales (actual procurement)	Percent of Bundled Retail Sales (Power Content Label)
Eligible Renewable	29.7%	27.4%
Fossil fuel-fired	36.6%	0.0%
Nuclear	45.0%	41.7%
Large Hydroelectric	33.3%	30.9%
Others, Net ^{2, 3}	(44.6)%	0.0%

1. Numbers may not add up to 100 due to rounding.

2. The allocation of bundled retail sale amounts and "Others, Net" in the "Power Content Label" column is consistent with current California Energy Commission guidelines, applied to specified electric generation and procurement volumes (i.e., fossil fuel-fired, nuclear, large hydroelectric, and renewable). Total reported generation and procurement volumes equate to actual electric retail sales.

3. Amount is mainly comprised of net California Independent System Operator open market (sales)/purchases.

Composition of PG&E's 2019 Total Eligible Renewable Resource¹

Solar	12.7%
Wind	9.5%
Geothermal	1.5%
Biomass and Waste	3.7%
Eligible Hydroelectric	2.3%
Total	29.7%

1. As defined in Senate Bill 1078, which created California's Renewables Portfolio Standard, and Senate Bill 1038, which modified the definition of "in-state renewable electricity generation technology," an eligible renewable resource includes geothermal facilities, hydroelectric facilities with a capacity rating of 30 MW or less, biomass and biogas, selected municipal solid waste facilities, photovoltaic, solar thermal, and wind facilities, ocean thermal, tidal current, and wave energy generation technologies. These figures are preliminary and will not be finalized until verified by the California Energy Commission.



Energy Storage Progress

PG&E is on track to meet its mandated energy storage procurement targets. In November 2018, the CPUC approved PG&E's proposal for 567.5 MW of storage, including a utility-owned 182.5 MW battery energy storage system and a third-party-owned 300 MW system, both to be located in Moss Landing, California.

In April 2020, PG&E executed and is awaiting CPUC approval for two energy storage projects totaling more than 43 MW as a part of the collaborative Oakland Clean Energy Initiative. This project represents a clean and innovative solution to a grid reliability challenge in the Oakland area—and combines near-term transmission upgrades, operational solutions and energy storage to maintain grid reliability and allow for the retirement of an aging fossil fuel generator in an urban area.

PG&E has also requested CPUC approval of five energy storage projects totaling 423 MW, intended to further integrate clean energy from renewable generation sources while ensuring future reliability of the electric system. The projects feature lithium-ion battery energy storage systems, each with a four-hour discharge duration. The new systems will either be co-located with solar or geothermal plants or be built as part of new energy storage projects.

The five projects are as follows:

- **The Diablo Energy Storage Project** is comprised of three separate 15-year agreements totaling 150 MW. The three projects will be stand-alone lithium ion battery energy storage resources located in Contra Costa County. This project is an expansion of a 50 MW energy storage project under contract to PG&E in Contra Costa County, which is currently in development.
- **The Vistra Energy MOSS100 Energy Storage Project** is comprised of a 10-year agreement for 100 MW. The project is a stand-alone lithium ion battery energy storage resource located in Moss Landing (Monterey County). This project is an expansion of a 300 MW energy storage project under contract to PG&E at the same location, which is currently in development.
- **The Gateway Energy Storage Project** is comprised of a 15-year agreement for a 50 MW stand-alone lithium ion battery energy storage resource located in San Diego.
- **The Blythe Energy Storage 110 Project** is comprised of a 15-year agreement for 63 MW. The project is a lithium ion battery energy storage resource and is co-located with an existing 110 MW solar project built in 2016 located in Blythe (Riverside County).
- **The Coso Battery Storage Project** is comprised of a 15-year agreement for a 60 MW transmission-connected, stand-alone lithium ion battery energy storage resource and is co-located with an existing geothermal project in Little Lake (Inyo County).



Hydroelectric Operations

PG&E owns and operates the nation's largest investor-owned hydroelectric system, providing a safe and reliable source of clean energy for millions of customers. We are committed to managing these water resources in a responsible way, to both supply our hydroelectric power generation facilities and manage water supplies for fisheries and downstream users.

Our Approach

PG&E's hydroelectric system is spread across California and consists of nearly 100 reservoirs that feed 65 powerhouses and a pumped storage facility, for a total generating capacity of nearly 4,000 MW of clean power. We manage our hydroelectric system to maintain the safety of the public and our workforce, protect wildlife habitat and sensitive species, and maintain popular recreation venues for the communities we serve, including campgrounds, picnic areas, boat launches, trails, fishing streams and whitewater flows.

As a source of consistent, flexible and clean energy, hydropower provides an important balance to help the energy grid integrate intermittent sources of renewable energy such as wind and solar. PG&E works closely with water districts, first responders and regulatory agencies to manage our water resources—whether in times of drought or periods of extreme precipitation. We work together to repair and strengthen infrastructure, manage wildfire risks and mitigate environmental impacts.

PG&E's Dam Safety Program has the mandate of maintaining the long-term safety and reliability of our water storage and water conveyance infrastructure and assuring compliance with the regulations of the Federal Energy Regulatory Commission and California's Division of Safety of Dams.

In 2019, we made significant progress in building out a programmatic series of enhancements to the Dam Safety Program that will establish a risk-informed approach and new tools that improve the way in which our engineering teams conduct their inspections, surveillance and monitoring of dams. With continuous improvement as a driving principle, the Dam Safety Program receives external feedback from a panel of established industry experts through the Dam Safety Advisory Board. We also expect to receive feedback in 2020 from the CPUC and other stakeholders through the Risk Assessment Mitigation Phase of our General Rate Case.

We continue to make significant investments to maintain and upgrade our dams and water conveyance systems to ensure their ongoing safety and reliability. In addition, we continue to engage with customers in populated areas downstream from PG&E dams through safety outreach.



PG&E, Division of Boating and Waterways Warn of Spring Water Hazards

California's Division of Boating and Waterways and PG&E continue to encourage water enthusiasts to take extra precautions when in or near rivers in the spring. Simple actions such as knowing if the water is too cold or swift, knowing your limits, wearing a life jacket or simply not entering the water when conditions are deemed unsafe can save a life.

2019 Milestones

In 2019, PG&E generated approximately 10.7 billion kWh of zero-carbon hydroelectric energy for the benefit of our customers.

In addition, PG&E stored approximately 745 million kWh of energy through the pumped storage process at our Helms Pumped Storage Plant. Located more than 1,000 feet inside a solid granite mountain, the facility alternately draws water from an upper reservoir to produce electricity when demand is high and pumps it back when demand is low for reuse during the next high-demand period. Our 2019 day-time pumping (energy storage) was consistent with the prior year. The ability to quickly ramp up and down plays a key role in integrating intermittent renewable resources, such as wind and solar, onto the power grid to support grid reliability and help meet California's clean energy goals.

Our environmental commitment also includes managing our hydroelectric facilities to enhance and, where possible, restore habitats for fish and other wildlife. As an example of our efforts, we have made progress toward restoring self-sustaining populations of chinook salmon and steelhead trout in Battle Creek. In a collaboration between PG&E and federal and state agencies, Winter-run chinook salmon were introduced into North Fork Battle Creek for the first time, while newly installed facilities at Inskip Dam will prevent mixing of Battle Creek's North and South Fork waters, enabling fish to return to the Fork with the best habitat for reproduction.

Measuring Progress

We gauge our hydroelectric performance in a number of ways: the reliability of our carbon-free hydroelectric power generation units; our progress on improving public safety around the flumes, canals and other waterways we manage; and our compliance with environmental requirements for our operating licenses.

Our facilities were consistently available nearly 98.6 percent of the time when they were planned to operate.

Hydropower Reliability¹

	Target	Actual
2017	98.9%	98.0%
2018	98.5%	96.9%
2019	98.5%	98.6%

1. Measures the percentage of time facilities are available when they are planned to operate.

As part of PG&E's wide-ranging public safety program, which includes K-8 education and an extensive dam safety and inspection program, we also track the installation of fencing and gates to further protect the public around PG&E-managed waterways.

In 2019, PG&E exceeded our goal for total area protected by fencing and gating by about 67 percent, and we are on track for our 2020 goal of 14,000 linear feet. We anticipate establishing a five-year plan in 2021, following further field evaluation of public access to the canal system.

Area Protected by Fencing and Gating (Linear Feet)

	Target	Actual
2019	6,273	10,497
2020	14,000	N/A

PG&E also tracks key indicators of our performance related to maintaining and managing our hydroelectric system and the fish and wildlife habitats that it encompasses:

Environmental Stewardship in Our Hydroelectric Operations—2019

Miles of stream monitored for environmental conditions ¹	461
Acres of bird nesting territories monitored ²	8,264
Acres monitored and/or treated for noxious weed control	5,646
Acres monitored for use by special status species ³	34,275

1. Refers to miles of stream monitored for conditions such as water quality/flow, sediment management, habitat quality, fish populations and invasive species.

2. Includes monitoring of bald eagle and other nesting territories at PG&E hydroelectric projects.

3. Special status species include those that are listed under the federal or state Endangered Species Acts or are otherwise given a specific designation by California or a federal resource or land management agency. Monitoring studies are required under various hydroelectric licenses.



Conventional Sources

As part of our diverse portfolio of generation resources, PG&E has invested in state-of-the-art and highly efficient natural gas-fired power plants. These facilities provide a safe and reliable source of energy, as well as the operational flexibility required to add additional intermittent renewable energy sources into our power mix to ensure we can meet the future energy needs of our communities.

Our Approach

PG&E operates three natural gas-fired plants with best-in-class emissions levels and reduced water use via dry cooling:

- Colusa Generating Station
- Gateway Generating Station
- Humboldt Bay Generating Station

As flexible combined-cycle power plants, the Colusa and Gateway Generating Stations are essential in PG&E's efforts to successfully integrate more renewable resources into the energy grid. When wind or solar production varies during the day, these facilities can ramp up quickly to generate the energy that customers need.

2019 Milestones

In 2019, PG&E continued the safe operation of our three natural gas-fired plants:

- **Colusa Generating Station:** This 657-MW combined-cycle natural gas plant features cleaner-burning turbines that allow the plant to use less fuel and emit significantly less NO_x, SO₂ and CO₂ than older plants. “Dry cooling” technology allows the facility to use 97 percent less water than plants with conventional once-through water cooling systems.

The plant has 530 MW of base capacity and approximately 127 MW of low-cost peaking power that can be used at times when demand is high or in emergencies. In addition, the plant is designed to lower its output when power from renewable resources like wind and solar becomes available. The plant uses a zero-liquid-discharge system that recycles wastewater and further reduces its water consumption.

- **Gateway Generating Station:** This 580-MW combined-cycle natural gas plant has 530 MW of base capacity and 50 MW of low-cost peaking capability. Like Colusa, the plant yields dramatically lower emissions for every megawatt-hour of power produced compared with older fossil-fueled plants. It also uses dry cooling technology, which minimizes water use.

- **Humboldt Bay Generating Station:** This 163-MW natural gas plant is located in a relatively isolated section of California’s north coast region and provides a significant majority of the area’s electrical capacity. The plant’s design—selected for the region because of its flexibility and low emissions—uses reciprocating engines that are air-cooled, reducing water use by eliminating the need for “once-through” cooling from Humboldt Bay.



Colusa Generating Station



Gateway Generating Station



Humboldt Bay Generating Station

Measuring Progress

In 2019, PG&E’s natural gas power plants provided safe, reliable and low-cost electricity to our customers. The following performance data represents the average availability factor of our natural gas power plants.

The increase in plant availability factors in 2019 at the Colusa and Humboldt Bay Generating Stations was due to strong operational performance, as well as the fact that planned outages at Humboldt Bay Generating Station were scheduled for the prior year. The decrease in Gateway’s plant availability factor was largely due to a forced outage caused by an electrical fault within the station; corrective actions have been implemented to address the issue.

Natural Gas Power Plant Availability Factor¹

	2017	2018	2019
Gateway Generating Station	93.8%	90.0%	89.1%
Colusa Generating Station	93.8%	91.2%	92.5%
Humboldt Bay Generating Station	92.3%	89.0%	95.2%

1. Refers to the proportion of hours in a year that a plant is available to generate electricity.



Nuclear Operations

PG&E's Diablo Canyon Power Plant generates enough carbon-free energy to meet the needs of more than 3 million Californians in a safe, clean, affordable and reliable way.

Our Approach

While Diablo Canyon Power Plant Units 1 and 2 will close in 2024 and 2025 respectively, we remain strongly committed to the highest levels of safety, performance and security at Diablo Canyon. The Nuclear Regulatory Commission's (NRC) latest annual assessment of the facility places Diablo Canyon among the highest-performing plants in the U.S. nuclear industry. This reflects the hard work and dedication of our employees and our commitment to meeting PG&E's and the NRC's high performance standards.

Spent Fuel Storage

At both Diablo Canyon and PG&E's former nuclear unit at the Humboldt Bay Power Plant, PG&E safely stores spent fuel in on-site dry cask storage systems approved and licensed by the NRC. Diablo Canyon also safely and securely stores spent fuel in a wet storage facility. This on-site storage system is safely used at nuclear power plants around the world. These two on-site interim storage solutions are federally monitored and follow industry best standards to ensure that they are safe and effective.

Water Management

PG&E actively manages the water used in the electric generation process in accordance with the water discharge limit set by Diablo Canyon's Clean Water Act permit.

2019 Milestones

In 2019, both Unit 1 and Unit 2 at Diablo Canyon underwent safe and successful refueling and maintenance outages. The Unit 2 stator was successfully replaced during the unit's planned outage; this key component of the generator puts out 1,143 megawatts of greenhouse gas-free electricity into the western grid during regular operations.

PG&E also continued decommissioning the former nuclear unit at the Humboldt Bay Power Plant, where site restoration and remediation efforts are in the final phase.

Measuring Progress

Diablo Canyon continues to demonstrate high operational performance as gauged by its plant capacity factor, a measure of generation reliability. Despite being a year when both units underwent a planned refueling and maintenance outage, Diablo Canyon achieved a capacity factor of 83 percent during 2019.

Nuclear Power Plant Performance

Average Capacity Factor ¹	
2016	96%
2017	91%
2018	93%
2019	83% ²

1. Refers to the ratio of the actual output of the plant relative to the output if the plant had operated at full capacity for the year.

2. In 2019, both units underwent a planned refueling and maintenance outage, which occurs approximately every five years. Additionally, the refueling outage on Unit 2 was a planned extended outage that lasted more than 80 days.



Bridging to California's Energy Future

State policies that focus on renewables and energy efficiency, coupled with projected lower customer electricity demand in the future, will result in a significant reduction in the need for the electricity produced by Diablo Canyon Power Plant past 2025.

However, the continued safe and reliable operation of the plant is needed through 2025 to support California in achieving its clean energy goals. PG&E will participate in the CPUC's Integrated Resource Planning process to shape our future energy portfolio to meet California's clean energy goals in a reliable and cost-effective manner.

Support for Employees and the Community

The CPUC granted PG&E approval to cease plant operations once the NRC operating licenses expire. The CPUC and the state legislature (through Senate Bill 1090) authorized ratepayer funding for employee retention, retraining and redeployment, as well as \$85 million for a community impact mitigation program.

The Diablo Canyon employee program provides incentives to retain employees during the remaining operating years of the plant, and a retraining and development program to facilitate redeployment of a portion of plant personnel to the decommissioning project or other positions within the utility.

The community impact mitigation program is meant to ease the local public health, safety and economic impacts of the closure of Diablo Canyon and to provide funding to support essential public services that the local community relies upon. More than \$28 million was distributed to the County of San Luis Obispo in 2019; remaining funds will be disbursed annually through 2025.

Current status

Nothing is more important than the safety of our employees, customers and the communities we serve. PG&E is focused on the continued safe and reliable operation of Diablo Canyon through the end of its operating licenses while preparing for a safe and successful decommissioning.



Corporate Governance

PG&E's corporate governance practices are foundational for how we operate as a business and engage as corporate citizens. The Corporate Governance section of our website details the policies and practices of the Boards of Directors of PG&E Corporation and Pacific Gas and Electric Company (together, the "Boards"), including governance guidelines, bylaws, disclosure standards, and Codes of Conduct for directors and employees.

Governance Reforms

As part of the Chapter 11 Cases, PG&E Corporation and the Utility committed to a substantial change in the makeup of the Boards of Directors. On July 1, 2020, in connection with our emergence from Chapter 11, PG&E Corporation substantially changed the membership of its Board of Directors to help guide the company post-bankruptcy. The new Board of Directors consists of 14 members, 11 of whom are new. Fifty-seven percent of the new Board members have geographic ties to California, and it is expected that the Board of Directors of the Utility will largely be the same as PG&E Corporation, with the Chief Executive Officer of the Utility serving as an additional member.

Upon our emergence from Chapter 11, William L. Smith became Interim Chief Executive Officer and President of PG&E Corporation effective July 1, 2020. The new Board of Directors of PG&E Corporation will be responsible for selecting a permanent Chief Executive Officer and President of PG&E Corporation.

As part of the Chapter 11 Cases, pursuant to the CPUC's decision approving the Plan of Reorganization with conditions and modifications, PG&E Corporation and the Utility have committed to certain changes to their corporate governance. Certain of the changes are evidenced by amendments to the articles of incorporation, bylaws, corporate governance guidelines, certain committee charters, and other documents. The principal changes include:

- The Board of Directors of each of PG&E Corporation and the Utility is classified as follows:
 - One class will serve an initial term to expire in 2021, with subsequent terms expiring in 2023, after which terms for this class will revert to one-year terms; and
 - The other class will serve an initial term to expire in 2022, with subsequent terms expiring in 2024, after which there will no longer be a classified Board of Directors and all directors will serve one-year terms;

- The Board of Directors of PG&E Corporation will consist of nine to fifteen directors until December 31, 2020 and twelve to fifteen directors thereafter, and the Board of Directors of the Utility will consist of nine to sixteen directors until December 31, 2020 and twelve to sixteen directors thereafter;
- All of the directors, aside from the Chief Executive Officers of each of PG&E Corporation and the Utility, will be “independent” (as defined under the rules and regulations of the New York Stock Exchange and the SEC);
- The evaluation criteria for candidates for the Board of Directors of PG&E Corporation and the Utility has been expanded to include enhanced safety expertise, including a requirement that the Chair of the Board of the Utility and members of the Safety and Nuclear Oversight Committees meet one or more designated safety expertise criteria;
- There is an executive-level Chief Risk Officer and executive-level Chief Safety Officer, who will be required to provide certain risk and safety reports to the CPUC periodically; and
- The Safety and Nuclear Oversight Committees have been granted increased authority and oversight of public and workplace safety programs, and must approve of executive officer candidates prior to appointments of such officers.

2018 Milestones

An underlying factor for strong corporate governance is the independence of the Boards and their fiduciary responsibilities to the companies and their respective shareholders. The companies’ respective Corporate Governance Guidelines promote board independence by requiring policies and practices such as the following:

- All directors of each company must be independent, with the exception of the CEOs of each company.
- An independent Chair of the Board or independent lead director (if the Chair is not independent) is elected by the Board.
- Only independent directors are allowed to serve on PG&E Corporation’s standing key Board committees. Further, members of each company’s Audit Committee and PG&E Corporation’s Compensation Committee also must meet additional independence standards. Members of the Safety and Nuclear Oversight Committees and the Utility Chair must meet additional safety expertise criteria.
- Executive sessions of the independent directors are held at each regularly scheduled Board meeting, without the presence of each company’s management.

Board diversity also contributes to strong corporate governance, and our policy considers diversity, age, residency, skills, applicable legal requirements and other factors, as part of the Boards’ assessment of PG&E’s needs at the given time. The Boards believe in developing a balanced and multidisciplinary Board at each company, and annually review director nominees and the extent to which diverse backgrounds, perspectives, skills and experiences are represented. The directors for each company reflect this diversity. Of the 14 directors, who each serve on the PG&E Corporation and Pacific Gas and Electric Company Boards, 29 percent are female and 29 percent are ethnically diverse (three are African-American and one is Asian).

The Compliance and Public Policy Committee of the PG&E Corporation Board of Directors has primary oversight of compliance and ethics and corporate sustainability issues, such as environmental compliance and leadership, climate change, workforce development, and other policy matters. This includes an annual review of PG&E’s environmental performance and sustainability practices. Other committees of the PG&E Corporation Board and the Pacific Gas and Electric Company Board, as well as the full Boards, address other components of PG&E’s sustainability commitment, such as public and employee safety, operational excellence and investments to increase our delivery of safe, affordable, and clean energy to our customers, and enabling a low-carbon future.

The PG&E Corporation and Pacific Gas and Electric Company 2019 Joint Proxy Statement includes information on director qualifications and the oversight role of the Boards with respect to risk management, compliance and ethics, political contributions, corporate sustainability, safety, and management succession, among other items. Some elements of this oversight function have been further enhanced by the corporate governance changes described above under Governance Reforms.

In connection with the 2017 settlement of shareholder derivative suits relating to the San Bruno accident, PG&E Corporation and Pacific Gas and Electric Company committed to making several enhancements (“therapeutics”) to its corporate governance and gas safety practices.

The corporate governance “therapeutics” include establishment and enhancement of Board committees responsible for safety oversight; regular public disclosure of API 1173 certification status; enhanced commitment to shareholder involvement through regular dialogue regarding corporate governance; updating the employee and supplier Codes of Conduct to incorporate various enhancements and updates, including updates to more fully promote and ensure safety culture and reporting; stating the respective responsibilities of the Chief Safety Officer (CSO), the Chief Ethics and Compliance Officer (CECO), and the Boards and their committees regarding instillation of safety culture, including responsibilities for communication and reporting; providing for regular attendance and reporting by the CSO and the CECO at Board and Board committee meetings, and providing those officers with access to senior management and employees; clarification regarding the incorporation of safety, compliance, and ethics into officer compensation; enhancement of a speak-up culture for employees and Board members; and enhancement of safety training for employees and Board members. To date, PG&E has implemented all of these corporate governance practices.



Public Policy Engagement

As a regulated energy provider, PG&E's business is shaped to a considerable extent by public policy at the local, state, regional and national levels. We regularly engage on a wide range of policy matters that are important to both PG&E and our customers, because the evolution of these policies plays a significant role in how we deliver safe, reliable, affordable and clean energy to customers, and defines the structure of the energy market.

Our Approach

PG&E advocates for public policies that help us to better meet the needs of our customers and employees, while adding value for our shareholders and furthering our goal of environmental leadership.

Much of our public policy work, including engagement with elected officials and policy makers, is done in collaboration with trade organizations like the Edison Electric Institute, the American Gas Association, the Interstate Natural Gas Association of America, the Nuclear Energy Institute and the National Hydropower Association as well as other organizations such as the Natural Resources Defense Council and the Alliance to Save Energy. Additionally, we partner with the International Brotherhood of Electrical Workers (IBEW) and the International Federation of Professional and Technical Engineers and other labor organizations on national energy policy, and with the IBEW Local 1245, the California Coalition of Utility Employees, the California Council for Environmental and Economic Balance, and other electric or gas energy providers on state energy policy.

2019 Milestones

The Compliance and Public Policy Committee of the PG&E Corporation Board of Directors maintains oversight of public policy matters. At the senior management level, the Executive Vice President, Law, Strategy and Policy of PG&E Corporation leads the development and implementation of PG&E's public policy activities.

The Compliance and Public Policy Committee reviews PG&E's political contributions program. The PG&E Corporation and Pacific Gas and Electric Company Boards of Directors establish management approval limits for political contributions from PG&E to candidates, measures, initiatives, corporate political action committees and certain other organizations that may engage in political activity. These approval authorizations may be delegated further within PG&E. The Compliance and Public Policy Committee also directs the preparation of an annual report detailing political contributions made by PG&E during the preceding year.

PG&E Corporation and its affiliates and subsidiaries are committed to fully complying with all applicable federal, state, local and foreign political laws, and to maintaining the highest ethical standards in the way we conduct our business.

PG&E makes corporate political contributions to:

- Candidates for state and local office,
- Political action committees (PACs),
- Political parties and other organizations that engage in voter registration and similar activities that encourage citizen involvement in the political process, and
- Nonprofit organizations, including those formed under Sections 501(c)(4) and 527 of the Internal Revenue Code.

Along with civic, charitable and volunteer activities, employees can participate in PG&E's political engagement. All eligible employees may make voluntary contributions to the following PACs: PG&E Corporation Employees EnergyPAC and Pacific Gas and Electric Company State and Local PAC. PAC contributions go directly to support candidates for elective office and political parties at both the federal and state levels, as well as other political action committees. By law, PG&E cannot use corporate funds to make contributions to federal candidates.

Recent Highlights

Public Policy Issues at the State Level

The 2019 legislative year was defined by the need to address wildfire liability and investor-owned utility financial stabilization. PG&E strongly advocated for ensuring financially healthy utilities to maintain our clean, reliable and affordable delivery of energy. PG&E also advocated for state investment in forest management and for streamlined vegetation management practices across the state.

In 2019, the legislature passed AB 1054, which incorporated elements of the work done by the Blue-Ribbon Commission and Governor's Strike Force Team. AB 1054 established a \$21 billion wildfire fund and expanded the definition of prudent manager. The bill also included protections for employees in the case that investor-owned utilities are sold or municipalized, stronger language around obtaining safety certification, and provisions clarifying that any successor agencies must follow the same rules laid out in the bill.

PG&E also advocated at the California Air Resources Board (CARB) on climate issues, including proposed amendments to strengthen the sulfur hexafluoride (SF₆) regulation. PG&E supports an orderly and systematic transition of the electricity transmission and distribution industry away from the use of SF₆ in gas insulated equipment due to the high global warming potential of SF₆ and the lack of a feasible destruction method for this persistent greenhouse gas. PG&E continues to work with CARB and industry on this rulemaking in 2020.

Also, in 2019, PG&E supported CARB's amendments to the Low Carbon Fuel Standard (LCFS) program to add additional cost containment mechanisms such as a firm ceiling price on all LCFS credit sales.

Public Policy Issues at the Federal Level

We support efforts to spur investment in and enhance the safety of our energy infrastructure, including increasing resilience in the face of climate change, protecting the physical and cyber security of the system, and implementing a smarter grid and advancing policies that stimulate continued critical investments for PG&E and the U.S. economy.

In particular, PG&E has been focusing on opportunities to increase wildfire resilience through advocacy and engagement with Congress and key policymakers in the Executive Branch to help accelerate the development and deployment of wildfire prevention technologies and improve federal land management policies.

For example, in December 2019, then PG&E Corporation CEO and President Bill Johnson testified before the U.S. Senate Committee on Energy and Natural Resources to share PG&E's perspective on how the federal government can help mitigate wildfire risk and increase grid resiliency through cooperative approaches to manage public lands, and transparent, consistent, and predictable federal permitting and review processes to ensure clean, safe, reliable and affordable energy service while protecting wildlife and other important natural resources.

Other areas of focus at the federal level include:

- **Increasing community resilience.** PG&E is engaging with federal policymakers on ways to increase pre-disaster mitigation and build resilience to national disasters. For example, PG&E supported efforts to include language in the *National Defense Authorization Act for Fiscal Year 2020* (Public Law No: 116-92) that directs the U.S. Department of Defense to examine whether its advanced technologies could help detect and respond to wildfire outbreaks more rapidly.
- **Clean energy and carbon reduction policy.** PG&E supports an economy-wide, market-based federal price on carbon as the most efficient, cost-effective means to reduce emissions, and we support complementary policies, such as incentives for electric vehicles and energy efficiency, that will help further reduce emissions. In addition to direct engagement with federal policymakers, PG&E participates in several coalition groups focused on climate policy, including the CEO Climate Dialogue, a group of 21 Fortune 500 CEOs and four environmental organizations that support an economy-wide price on carbon. We are also focused on action related to grid innovation and reliability; renewable energy and storage research, deployment, and adoption; hydropower licensing modernization; transportation electrification and efficiency; and energy efficiency codes and standards.
- **Customer affordability.** PG&E continues to advocate that Congress provide sufficient federal funding for the Low-Income Home Energy Assistance Program (LIHEAP), which provides much needed energy bill payment assistance to PG&E customers on fixed and low incomes. In December 2019, Congress passed, and the President signed into law, a spending package that included \$3.74 billion for LIHEAP funding, an approximately \$90 million increase from the previous year.

Measuring Progress

In 2019, PG&E-affiliated employee PACs (EnergyPAC and State and Local PAC) made contributions of \$355,000 at the federal level and \$0 at the state and local level. PG&E contributed \$225,000 to state and local political candidates, ballot measures, political parties and other committees. Our annual political contributions are publicly reported on PG&E Corporation's website.

Political Contributions, 2019

PG&E Corporation Employees Federal PAC Contributions	
U.S. House	\$157,500
U.S. Senate	\$30,000
Other Federal PACs and Committees	\$167,500
Total	\$355,000
Pacific Gas and Electric Company Employee State and Local PAC Contributions	
Total	\$0
Corporate Campaign Contributions	
Total Corporate Contributions to Candidates	\$0
Total Corporate Contributions to Other Committees	\$225,000
Total	\$225,000

PG&E also discloses its policies and procedures regarding its lobbying activities and trade association payments, including the portions of any annual trade association membership dues over \$50,000, to the extent those dues are used for lobbying purposes.

Trade Association Dues, 2019¹

Portion of Dues That Were Nondeductible	
Total	\$420,390

1. Represents the portion of membership dues to trade associations that was nondeductible under Section 162(e)(1) of the Internal Revenue Code. Includes trade associations that received annual membership dues over \$50,000. The reported amount is based on information provided by the trade associations to PG&E Corporation and Pacific Gas and Electric Company.



Safety

Key Sustainability Indicators

20.8 minutes

Average response time to gas odor reports

171 line miles

System hardening completed in high fire threat districts

At PG&E, safety is our most important responsibility. Fulfilling our goal of becoming the utility that our customers expect and deserve requires that they, as well as the public and all our stakeholders, are able to trust that we will deliver electricity and natural gas safely, reliably and with unquestioned integrity.

Our focus is to continually reduce risk. Today, we are building an organization in which we have designed every work activity to facilitate safe performance, every member of our workforce knows and practices safe behaviors, and every individual is encouraged to speak up if they see unsafe or risky behavior and has confidence that their concerns and ideas will be heard and followed up on.

This focus is fundamental to all of our operations and consistent with PG&E's Mission, Vision, and Culture.

Highlights

Continued to build a safety culture in which every member of our workforce is not only encouraged to speak up, but has confidence that their concerns and ideas will be heard and followed up on.

Appointed an Independent Chief Safety Advisor to the PG&E Corporation CEO and President and launched an Independent Safety Oversight Committee.

Delivered more than 42,000 days of training on courses specifically focused on safety and compliance.

Executed our Community Wildfire Safety Program to further reduce wildfire risks and keep our customers and the communities we serve safe.

Awarded \$2 million in wildfire prevention grants to local Fire Safe Councils.

Expanded our partnership with the California Fire Foundation by funding a \$1 million wildfire safety and preparedness grant focused on providing funding for firefighters and Community/Neighborhood Emergency Response Teams.

Continued to make safety performance the single largest driver for annual at-risk performance-based pay.

Hosted 375 training workshops to better prepare firefighters, police, public works officials and other authorities to respond to emergencies involving electricity and natural gas.

Worked with other gas and electric providers, other essential industries and government officials to develop and implement state-of-the-art security strategies and best practices.



Safety Culture

PG&E recognizes that we must improve our safety culture and performance. We are working to transition from a compliance-focused to a risk-focused organization that holds each of us accountable for safety, resolves issues promptly, and has engagement at all levels within PG&E.

As a key step toward strengthening our safety culture, we hired Francisco Benavides who currently serves as Pacific Gas and Electric Company's Senior Vice President and Chief Safety Officer (CSO). Mr. Benavides brings 30 years of industrial safety, health and environmental experience to this role. His past work has demonstrated injury rate reductions from 40 to 90 percent, eliminating fatalities and reducing the rate of high-potential incidents.

Mr. Benavides reports to the PG&E Corporation CEO and President and is responsible for setting our workforce safety strategy (including employee and contractor safety), establishing governing standards for safety implementation and supporting PG&E's operational safety execution.

Additionally, in our proposed regionalization of operations, each region will have a Regional Safety Lead who reports to the CSO and who is accountable for safety at the local level. The Safety Lead will work with the leadership in their region to identify region-specific hazards and assess risk, verify critical field controls, provide coaching on positive safety interactions, and coordinate the implementation of enterprise-wide safety programs within their region.

Safety Governance and Leadership

The PG&E Corporation and Pacific Gas and Electric Company Boards of Directors are responsible for oversight of safety. The Boards oversee the business and affairs of PG&E by establishing an appropriate "tone from the top," setting and providing oversight on corporate policies and goals, and holding management accountable for results. This requires directors who are independent, have diverse skills, and participate actively in the Board and its committees.

The Safety and Nuclear Oversight (SNO) Committees of the PG&E Corporation and Pacific Gas and Electric Company Boards are responsible for overseeing and reviewing policies, practices, standards, goals, issues, risk and compliance relating to safety. Among other things, the SNO Committee focuses on:

- Principal risks arising out of PG&E's operations and facilities, the process used by management to analyze and identify these risks, and the effectiveness of programs to manage or mitigate these risks;
- The Utility's goals, programs, policies and practices with respect to improving safety practices and operational performance as well as promoting a strong safety culture; and
- Periodically visiting the Utility's nuclear and other operating facilities.

The Boards hold regularly scheduled meetings, and the SNO Committee must meet at least six times per year. Members of PG&E management regularly attend Board and Committee meetings. The SNO Committees' charters specifically require regular review with the CSO of PG&E's long-term safety goals and objectives, as well as current staffing and budgeting needs.

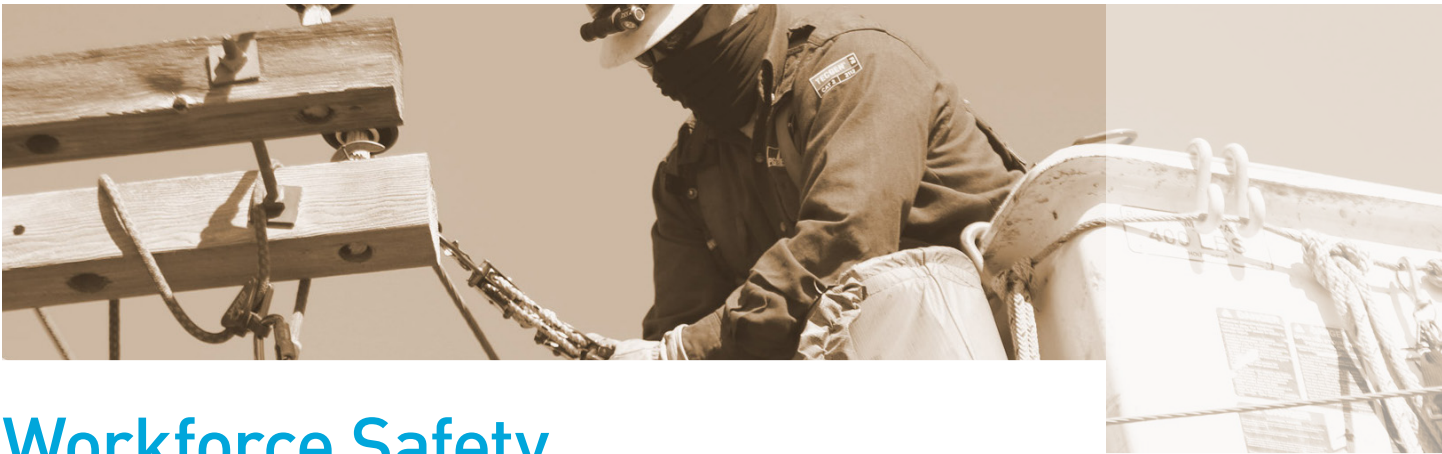
The following management-level committees and teams are working to ingrain a new level of safety into our business:

- **Enterprise Safety Committee:** Meets quarterly to review performance and address gaps and barriers to improvement. In addition to the Pacific Gas and Electric Company CEO and President, members include additional senior PG&E officers and directors, and leaders from the International Brotherhood of Electrical Workers (IBEW) and the Engineers and Scientists of California (ESC) labor unions.
- **Safety Technical Council:** A collaborative forum that reviews and provides input into key safety strategies, initiatives and programs. It also provides a forum for learning across our lines of business. The Council includes the CSO, Enterprise Health and Safety and line of business Safety Directors and leaders from the IBEW and ESC.
- **Line of Business Safety Councils:** Responsible for executing plans to reduce and eliminate exposure to safety hazards. These efforts are supported by grassroots safety teams comprised of frontline employees who share ideas and partner to come up with effective solutions to reinforce a strong and proactive safety culture.

At PG&E, the safety responsibilities are shared by our lines of business. This approach is strategic, practical and founded upon the best practice of the industry, recognizing that the hazards within each line of business may be different. We also believe that the people closest to the work know the most about the inherent risk associated with performing it. Encouraging our employees to speak up helps us to better understand and address those risks.

Key safety leadership development and employee engagement initiatives include:

- **Safety leadership development for all operational leaders:** All operational and crew leads attend a workshop that creates alignment around safety leadership principles, safety culture and the role leadership plays in reinforcing a strong safety culture.
- **Further integration within our hiring process:** PG&E uses pre-hire tests for certain roles ranging from operating clerks to line workers and system operators to assess candidates' predisposition to follow safe practices. We are also working to determine other jobs where this test may be used.
- **Safety Summits:** Throughout the year, teams across our service area hold safety summits to discuss safety and health hazards associated with field level work. These meetings reinforce the importance of safety in our daily work.
- **Strengthening job requirements for field safety specialists:** Field Safety Specialists go through a rigorous safety professional development program.



Workforce Safety

A strong safety culture is fundamental to our operations and our performance during the past few years has fallen short of that aspiration. We have not always practiced what we preach and have identified a number of gaps we need to close. We know we can do better and we have to do better.

Workforce Safety Strategy

Our workforce safety strategy includes two major pillars: systems and culture. Systems refers to risk management, equipment, processes and procedures. Culture refers to employee engagement, adherence to established requirements, a sense of urgency for safety, and leadership. Focus areas will include:

Enterprise Safety Management System	<ul style="list-style-type: none"> ▪ Design, document and implement a clear, actionable safety plan and management system
Enhanced risk management	<ul style="list-style-type: none"> ▪ Identify and assess hazards at the task level ▪ Improve risk management standards consistent with leading practices, including critical controls
Contractor management	<ul style="list-style-type: none"> ▪ Increased supervision and safety officer presence, stronger safety criteria in the contractor selection process, and safety-focused contractor management training for PG&E employees
Standards	<ul style="list-style-type: none"> ▪ Improve our safety technical standards by simplifying them, clarifying them, and making them more protective, consistent with leading industry practice
Musculoskeletal Disorder (MSD) Programs/ Ergonomics	<ul style="list-style-type: none"> ▪ Use data to develop a proactive approach for identifying high risk physically demanding field jobs for detailed evaluations ▪ Office ergonomic specialists will use keyboarding data to proactively work with employees prior to them experiencing discomfort
Safety audits	<ul style="list-style-type: none"> ▪ Design and schedule audits to reflect risk-based scope and frequency, with participation from operations and trained auditors
Data management, systems and reporting	<ul style="list-style-type: none"> ▪ Improve data capture by including more detail about the reasons behind the most serious incidents ▪ Utilize a database to further enhance our ability to digitize checklists, reports and communications, and make the information available to supervisors in the field
Safety culture	<ul style="list-style-type: none"> ▪ Emphasize recognizing, reporting and responding to incidents; increase the presence of officers and directors in the field to have informal safety conversations with employees; recognize and celebrate safety practices and accomplishments; and use safety as a dimension in talent management and assessment

To improve the way we work, we recognize that we must work more effectively across our teams and make faster and more efficient decisions to improve our performance and become the company that our customers want and deserve. To achieve this goal, PG&E is establishing a Governance Oversight Execute Support (GOES) accountability model, which will focus on functions—like safety—where clarifying roles and responsibilities will make a meaningful difference.

We will also continue to take a multifaceted approach to protect the safety of the public include vegetation management, electric grid sectioning, process safety for gas operations, transportation safety and asset management. Under our new strategy, we will better coordinate the planning for these different components and integrate our reporting; additionally, our Chief Safety Officer will be part of the Public Safety Power Shutoff (PSPS) process, playing an oversight role.

2019 Milestones

Employee Safety

In 2019, PG&E made progress in employee safety with a number of highlights:

- **Appointed an Independent Chief Safety Advisor and launched an Independent Safety Oversight Committee (ISOC)** by completing an initial review focused on electric operations and our wildfire safety efforts.
- **Defined our Enterprise Safety Management System** by compiling a draft set of policies and standards that set the foundation for implementation.
- **Made progress with our “leadership in the field” initiative** by focusing on increasing the amount of time front-line leaders spend in the field with their crews observing and addressing safety issues and concerns.
- **Reduced serious injuries and fatalities (SIF) as part of an emphasis** on safety in the field, reporting incidents and creating a stronger safety culture. We also reduced the time to close serious injury and fatality incidents by 42 percent.
- **Continued the Corrective Action Program (CAP) to report and track follow-up on potential safety concerns.** Employees from across the enterprise submitted more than 39,000 issues and improvements through CAP in 2019, with submitters reporting a resolution satisfaction score of 3.6 out of 5.
- **Continued technical training for field employees.** We delivered 42,000 days of training on courses specifically focused on safety and compliance. We also opened a Substation Training Center focused on electric substation operations and maintenance.

Contractor Safety

A key area of our workforce safety strategy includes strengthening our contractor safety to reduce risk, so our contractors go home safe every day.

We expect our contractor workers to share our commitment to public and workforce safety. Our Contractor Safety Program requires contractors performing medium- and high-risk work to meet prequalification requirements to perform work for or on behalf of PG&E.

PG&E contractors and subcontractors include roughly 2,200 contractor companies, as well as approximately 26,000 individuals. These contractors worked more than 44 million hours during 2019, supporting PG&E’s diverse work efforts.

Our Contractor Safety Standard and associated line of business contractor safety oversight procedures set requirements for managing contract work, including procedural steps for each line of business. These procedures include providing post-job safety performance evaluations of contractor work and sharing lessons learned resulting from safety incidents. We use compliance assessments to evaluate our effectiveness and identify any gaps in how we implement the procedures.

PG&E has also established an approval process for new contractors, those in business less than three years or for existing contractors identified as increasing their staffing significantly, reflecting rapid company growth. This process includes an assessment of the management staff, organizational structure, proposed span of control, relevant work experience, employee training plan, implementation plan and reference checks.

Additionally, for rapid growth companies, we evaluate the contractor's capacity to respond to the increased staffing by factoring in additional safety measures. In 2019, PG&E reviewed forty-five contractors that were new in business and another fifty-two that grew rapidly.

PG&E has also implemented a contractor safety inspection program, which involves internal safety professionals conducting unannounced job site safety audits to validate contractor compliance with OSHA, PG&E and job-specific safety requirements.

Measuring Progress

PG&E uses a variety of metrics to track our workforce safety performance. In 2019, PG&E had no employee serious injuries or fatalities and we improved our timely reporting of injuries. However, we experienced three serious injuries to contractors. We also experienced an upward trend in our employee OSHA Recordable Rate, Days Away Restricted and Transferred (DART) Rate, and Preventable Motor Vehicle Incidents Rate. These results are not acceptable.

PG&E is committed to eliminating fatalities, reducing serious injuries and improving our injury rates. The table below provides complete PG&E employee safety statistics for 2017 through 2019:

Employee Safety Statistics

	2017	2018	2019
OSHA Recordable Rate¹	3.11	2.94	3.29
Days Away, Restricted, and Transferred (DART) Rate²	1.99	1.81	2.05
Serious Injuries and Fatalities Rate³	0.01	0.004	0.00
Serious Injuries and Fatalities Count ⁴	3	1	0
Timely Reporting of Injuries⁵	69.3%	74.9%	75.7%

1. The OSHA Recordable Rate measures how frequently OSHA recordable occupational injuries and illnesses occur for every 200,000 hours worked, or for approximately every 100 employees.

2. The Days Away, Restricted, and Transferred (DART) Rate measures how frequently DART cases occur for every 200,000 hours worked, or for approximately every 100 employees.

3. The serious injuries and fatalities (SIF) rate measures how frequently SIF events occur for every 200,000 hours worked, or for approximately every 100 employees. A SIF event includes fatalities, life threatening injuries and life altering injuries.

4. The SIF actual count includes fatalities, life threatening injuries and life altering injuries.

5. Timely Reporting of Injuries is the percentage of work-related injuries reported to our 24/7 Nurse Care Line within one day of the incident.

While PG&E's contractor workforce population increased by 11 percent in 2019, the total OSHA Recordable Incident Rate for contractors decreased by 15 percent over the past three years. The table below provides PG&E contractor safety statistics for 2017 through 2019:

Contractor Safety Statistics

	2017	2018	2019
OSHA Recordable Rate¹	0.89	0.93	0.91
Days Away, Restricted, and Transferred (DART) Rate²	0.56	0.58	0.47
Serious Injuries and Fatalities Rate³	0.011	0.016	0.013
Serious Injuries and Fatalities Count ⁴	2	3	3

1. The OSHA Recordable Rate measures how frequently OSHA recordable occupational injuries and illnesses occur for every 200,000 hours worked, or for approximately every 100 employees.

2. The Days Away, Restricted, and Transfer (DART) Rate measures how frequently DART cases occur for every 200,000 hours worked, or for approximately every 100 employees.

3. The serious injuries and fatalities (SIF) rate measures how frequently SIF events occur for every 200,000 hours worked, or for approximately every 100 employees. A SIF event includes fatalities, life threatening injuries and life altering injuries.

4. The SIF actual count includes fatalities, life threatening injuries and life altering injuries.

The following table provides employee motor vehicle safety statistics for 2017 through 2019:

Motor Vehicle Safety Statistics

	2017	2018	2019
Preventable Motor Vehicle Incidents Rate¹	2.43	2.79	2.91
Serious Preventable Motor Vehicle Incidents Rate²	0.29	0.19	0.35

1. The Preventable Motor Vehicle Incidents Rate measures the number of incidents occurring that the driver could have reasonably avoided, per 1 million miles driven.

2. The Serious Preventable Motor Vehicle Incidents Rate measures preventable incidents that included towing, over \$5,000 in damage to a PG&E vehicle or any party needing treatment away from the scene.

PG&E also actively tracks several leading indicators which can inform adjustments that need to be made before a potential incident occurs. These measures will help us more deeply embed safety in our operations and to encourage employees to speak up. They include:

- Corrective Action Program participation rate
- Percent of Corrective Action Program issues closed on time
- Percent of anonymous Corrective Action Program submissions



Public Safety

PG&E's efforts to keep the public safe range from comprehensive programs to train our workforce to investments in our gas and electric infrastructure to enhanced record-keeping systems. With the increased wildfire threat our state faces, PG&E is also enhancing and expanding our efforts to reduce wildfire risks and keep our customers and communities safe.

Importantly, safety must and will come first as we continue through the reorganization process called for under our Chapter 11 bankruptcy proceeding. We will continue to prioritize safety, and the necessary steps and actions that must be taken to make the energy system safer.

Our Approach

Embedding Safety in Our Operations

We take a multifaceted approach to protect the safety of the public through our operations:

- **Electric Operations:** PG&E's safety efforts in our electric operations can be seen in our efforts to harden our infrastructure, modernize the grid and execute the Community Wildfire Safety Program to continue to improve our ability to deliver power safely and reliably. This includes listening sessions with stakeholders to improve our PSPS program going forward by making events smaller in size, shorter in length and smarter for our customers.
- **Gas Operations:** PG&E continuously works with the goal to make our natural gas system the safest in the nation, with a focus on maintaining our best-in-class asset management certifications, meeting all compliance standards, and maintaining rigorous pipeline safety management systems.
- **Energy Supply:** PG&E remains focused on safely operating the Diablo Canyon Power Plant and our natural gas-fired generation facilities. We also continue to inspect and maintain our hydroelectric system according to strict safety guidelines and to enhance public safety outreach in communities around our facilities.

Community Wildfire Safety Program

More than half of the area where our customers live and work is at high risk for wildfires. Our Community Wildfire Safety Program includes short-, medium- and long-term plans to make our system safer. Our goal is to further reduce wildfire risks and keep our customers and the communities we serve safe. This includes:

- **Accelerated inspections of electric towers and poles.** In 2019, these safety inspections included approximately 50,000 transmission structures in high fire-risk areas, all 222 substations in high fire-risk areas, and nearly 700,000 distribution poles in, or adjacent to, high fire-risk areas. Inspections included climbing of transmission towers and use of drones to capture high-definition photos of system components. Progress on PG&E's wildfire safety inspections program is available to customers.
- **Deployment of the Satellite Fire Detection and Alerting System.** After several years of testing and development, PG&E rolled out this state-of-the-art technological program that incorporates data from the two new GOES satellites, as well as three polar orbiting satellites, to provide PG&E with advanced warning 24/7 of potential new fire incidents. Out of 82 fires reported out by PG&E's Wildfire Safety Operations Center, the satellite detection program alerted to 62 percent of these. Once filtered for fires that grew to over 30 acres, the satellite detection program alerted to 90 percent of these.
- **Miles of stronger, more resilient infrastructure.** PG&E is upgrading our electric system in the highest fire-risk areas by ultimately installing approximately 7,100 miles of stronger poles and covered power lines. In some cases, targeted undergrounding of power equipment is possible.
- **Public Safety Power Shutoff.** PG&E is implementing additional precautionary measures to help reduce the risk of wildfires. For public safety, it may be necessary for us to turn off electricity when extreme fire danger conditions are forecast. PG&E used this safety tool nine times in 2019.
- **New weather stations and high-definition cameras.** PG&E is adding approximately 1,300 weather stations and 600 cameras by 2022 to provide improved awareness and real-time monitoring across high fire risk areas.
- **Wildfire Safety Operations Center.** In 2018, PG&E opened a new Wildfire Safety Operations Center, staffed 24/7, to monitor potential fire threats across PG&E's service area in real time and coordinate with first responders and public safety officials to respond to any emerging threats and help keep communities safe.

Gas Safety

It is our fundamental responsibility to design, build, maintain and operate our gas system to keep customers and communities safe. Our 2020 Gas Safety Plan demonstrates PG&E's commitment and progress in implementing processes, programs and procedures to achieve our vision to become the safest and most reliable natural gas utility in the nation.

For example, PG&E continues to invest in the safety and reliability of our gas transmission pipeline system. From 2011 to 2019, PG&E has achieved the following results:

- Validated safe operating pressure by strength-testing 1,495 miles of gas pipeline.
- Replaced 269 miles of gas transmission pipeline.
- Automated 360 valves, enabling automatic or remote-control shutoff of gas in an emergency.
- Retrofitted 1,316 miles of gas transmission lines to accommodate in-line inspection tools, or "smart pigs," which are used to inspect the condition of pipelines using sophisticated technology.

During this timeframe, we have also installed 2,907 SCADA visibility and control points on the gas transmission system and 4,314 SCADA visibility and control points on the gas distribution system to monitor pressure and flow.

Our 2020 Gas Safety Plan outlines both the work we accomplished in 2019, and our plan moving forward to achieve our goals. The plan includes an expanded focus on several areas:

- Efforts to improve our safety culture through partnerships across our gas organization leadership, grassroots safety teams and labor unions.
- How our Corrective Action Program is an integral part of our safety culture as it provides a mechanism for employees to speak-up and report issues or ideas related to gas assets and processes as well as tracks actions taken to address such issues, some of which include conducting cause evaluations.

- A third-party assessment of our gas operations compliance with the intent of API Recommended Practice 754, Process Safety Performance Indicators, demonstrating a commitment to incident prevention.

While we have made progress in key safety areas, we realize there is more to do to demonstrate our commitment and progress towards gas safety excellence.

Emergency Preparedness and Response

To prepare for major weather events and natural disasters—earthquakes, wildfires, floods, heavy winds and blizzards—PG&E relies upon our enterprise-wide Emergency Response Program Management Office (PMO), through which we continually review and strengthen our catastrophic emergency response plans.

The PMO ensures that we have:

- Clearly defined organizational structures, roles and responsibilities,
- Restoration priorities that incorporate community needs to help customers get back to normal,
- Effective logistics plans that support restoration needs,
- Technology that is ready and available to support our response,
- Employees who are trained and fully understand their emergency roles, and
- Employees who are personally prepared for emergencies and ready to respond at home and at work.

2019 Milestones

Storm and Earthquake Preparation

PG&E works year-round to prepare for extreme weather events through advance planning, new initiatives and the incorporation of state-of-the-art technologies.

Highlights from 2019 include:

- **Launched the Safety Action Center**, a dedicated safety webpage featuring helpful information about wildfire risks and what customers can do to keep their home, family or business safe, including tips on how to create an emergency plan, emergency preparedness guides and videos.
- **Urging customers** to update their contact information, as part of a campaign encouraging customers to have a plan for the growing threat of climate-driven extreme weather and wildfires. PG&E is asking customers to update their mobile numbers, email addresses and other contact information so PG&E can communicate with them through important wildfire safety alerts. The effort included earned and social media.
- **Participating in an earthquake preparedness initiative**, focused on the impacts of a hypothetical 7.0 earthquake along the Hayward fault on PG&E's infrastructure. PG&E used a new facility in Vacaville, designed to serve as an alternative Emergency Operations Center and away from Bay Area faults.
- **Co-sponsoring the annual California Day of Preparedness event**, sponsored by the California Governor's Office of Emergency Services (Cal OES), where dozens of state and local agencies, first responders and other community organizations offered a variety of preparedness tips and activities. Held in Old Sacramento, the event drew more than 6,000 people.

First Responder Collaboration and Assistance

In an emergency situation, our first priority is to protect the health and welfare of the public. We do that by coordinating and communicating with police, fire and other officials in an effort to keep the public and first responders safe. Our emergency response plan—which is developed, shared and tested with emergency officials—defines clear lines of responsibility for PG&E and emergency personnel. PG&E also maintains a secure First Responder website, where emergency officials can access training materials and gas transmission infrastructure information and maps.

Last year, PG&E hosted 375 training workshops to better prepare firefighters, police, public works officials and other authorities to respond to emergencies involving electricity and natural gas. We also met with 370 local fire entities to address contingency planning for gas-related events.

Community Outreach and Partnerships

We regularly work with community partners to better prepare for emergencies. Examples include:

- **Awarded \$2 million in wildfire prevention grants to local Fire Safe Councils.** The grants marked the sixth year PG&E partnered with 28 local California Fire Safe Councils and other non-profit partners to fund shovel-ready projects, with funds going to 25 counties for 46 projects to help keep communities safe. The funds paid for fuel reduction, emergency access and defensible space projects, as well as chipper days in local communities.
- **Expanded a partnership with the California Fire Foundation** by funding a \$1 million Wildfire Safety and Preparedness grant focused on providing funding for firefighters and Community/Neighborhood Emergency Response Teams (CERT/NERT) in Northern California, specifically communities identified as extreme or elevated fire risk.
- **Funded four new local climate resilience projects through the Better Together Resilient Communities grant program.** For the third year, this initiative, funded by the Utility and The PG&E Corporation Foundation, provided four \$100,000 grants to support local planning efforts to build resilience to extreme events and other risks related to climate change, with a focus on grants that build community capacity to reduce wildfire risk and support healthy and resilient forests and watersheds.

Public Safety Awareness

Educating the public about working safely around our systems and facilities, and on how to stay safe during emergencies, remains a key element of our public safety strategy. Examples include:

- **Urging customers and contractors to call 811 before digging.** A call to 811 is the best safeguard and the first line of defense to preventing strikes on underground utility lines. Callers are connected to their local 811 center that notifies the appropriate utility of their intent to dig. That utility operator sends a specially trained and qualified technician to the digging site to mark the approximate locations of underground lines with flags or spray paint.
- **Emphasizing safety around downed power lines** by providing safety tips online and through an extensive public advertising campaign. PG&E also urged customers to have a storm preparation plan and provided instructions on how to create an emergency supply kit.
- **Building a new, standalone cloud-based website specifically for emergencies.** This includes revised PSPS content and tools for easier usability for customers.
- **Promoting public safety around PG&E waterways**, including dam safety and encouraging customers to take extra precautions around hydroelectric facilities and dams, where water flows can change rapidly.
- **Taking a stand against scams.** As part of the Utilities United Against Scams, a consortium of more than 100 U.S. and Canadian energy companies, PG&E advised customers on how to protect themselves against potential scammers.

Cyber and Physical Security

Pacific Gas and Electric Company operates infrastructure that has been deemed critical to our national and economic security. As such, PG&E is firmly committed to working with other gas and electric providers, other essential industries, and government officials to develop and implement state-of-the-art security strategies and best practices.

PG&E's Security Organization includes both cyber and physical security teams, reporting to Pacific Gas and Electric Company's Senior Vice President and Chief Customer Officer. The combined functionality of the teams demonstrates PG&E's commitment to addressing evolving threats and complex risks. Recent security attacks on industrial control systems illustrate the importance of these efforts.

PG&E's priority is to protect our customers, employees, information and assets. We seek to continually improve our services through strategic deployment of our resources, standardizing security practices and policies, and reinforcing and promoting security awareness across the enterprise.

As PG&E's technological footprint expands, the need to protect our people, assets and information from attacks becomes even more essential. We have made investments in key areas to modernize the security infrastructure and to build service capability, providing the security team with the tools they need to manage challenges to our critical infrastructure.

Once risks are identified and prioritized, we develop mitigation plans to protect the enterprise and reduce risk. PG&E has around-the-clock centralized security monitoring operations for threat detection, situational awareness, incident management, and emergency response to proactively defend PG&E from both cyber and physical threats.

Measuring Progress

PG&E tracks our public safety performance via a set of public safety metrics with the aim of continuous improvement.

As safety is PG&E's most important responsibility, in 2019, safety performance constituted 65 percent of management's annual at-risk performance-based pay. The customer service metric was weighted at 10 percent and financial performance at 25 percent.



Customers & Communities

Key Sustainability Indicators

1,253^{GWh}

Electricity saved through customer energy efficiency, exceeding our target

41.2%

Percentage of PG&E's overall procurement with diverse certified suppliers

PG&E's focus on investing in our infrastructure and improving our operations is designed to reduce risk and support our mission of providing customers with safe, reliable, affordable and clean energy. Every day, we are also working to better understand the energy needs of our customers, support cleaner energy options and increase customer choice. Our commitment also includes working locally to support the vitality of the communities where our employees live and work.

Highlights

Helped customers save more than \$300 million on their energy bills and avoid the emission of nearly 640,000 metric tons of carbon dioxide through our energy efficiency programs.

Brought the total number of interconnected private solar customers to nearly 465,000.

Supported over 8,000 customers who have installed battery storage at their homes or businesses, often paired with a solar system.

Expanded our energy efficiency financing program, which provides commercial customers and government agencies with loans for energy efficiency upgrades with no out-of-pocket costs and zero interest, funding 668 loans worth a total of \$59 million.

Installed approximately 2,300 Level 2 charging ports at workplaces and multi-family dwellings and launched programs to support medium- and heavy-duty fleets and public fast charging.

Contributed \$17.5 million to charitable organizations through our Better Together Giving Program and the PG&E Foundation, designed to help address critical social, educational and environmental challenges in the communities we serve.

Continued to offer our community renewables programs, which give customers the option to purchase 100 percent of their electricity from a universal solar program, without the need to install private rooftop solar panels.

Achieved industry-leading supplier diversity results, spending \$3.41 billion—or 41.15 percent of our total expenditures—with businesses owned by women, minorities, service-disabled veterans and LGBTQ individuals.



Engaging Customers

At PG&E, we value the rich diversity of the customers and communities we serve. Notably, our Mission, Vision, Culture statement—the guiding principles of how we operate—puts the customer front and center.

Our centralized customer service model coupled with local field-based operations allows us to serve customers through our contact center and web services, while working with customers on a local level to help them better understand their energy needs and manage their energy costs. Over the last several years, PG&E has also significantly enhanced our wildfire safety education and awareness efforts to improve customer preparedness and safety.

Our Approach

Pacific Gas and Electric Company's Customer Care organization, led by the company's Chief Customer Officer, works to deliver the best experience for each and every customer. This includes using data-informed insights to improve the customer experience, localizing our presence and strategies in the communities we serve, and empowering customers with greater choice and control over how they manage their energy use. We also continuously integrate customer feedback to develop, enhance and improve our products and services.

COVID-19 Response

During the COVID-19 public health crisis, we know that many of our customers may face uncertainty and financial instability due to school and childcare closures, job loss and other economic impacts.

PG&E has implemented a series of emergency protections to support customers who have been impacted by the pandemic, including suspending service disconnections for non-payment, waiving security deposits, implementing flexible payment plan options, and providing additional support for low-income and medical baseline customers.

PG&E committed \$1 million to support COVID-19 relief efforts in our service area. PG&E also donated nearly 1 million N95 and surgical masks for distribution to California hospitals and other first responders. This funding was supported by PG&E utility charitable contributions and The PG&E Corporation Foundation and focuses on general relief; food security for vulnerable communities, including seniors; and support for small businesses.

PG&E also recognizes that many residential customers are now spending considerably more time at home and using more energy than normal. Customers can take advantage of energy saving options and can view a personalized rate plan comparison at pge.com to help determine if there is a better rate plan for their household.

As we all continue to respond to the ongoing COVID-19 crisis, we want our customers to know that PG&E is committed to providing safe, reliable and affordable energy, and that we will continuously look for additional ways to help during these challenging times.

We have also instructed our employees who have in-person customer interactions to take social distancing precautionary measures, such as avoiding handshakes and wearing disposable nitrile gloves while in customers' homes. We are committed to addressing customer service needs and maintain a dedicated customer education resource regarding the COVID-19 pandemic.

Making PSPS Events Shorter, Smaller and Smarter for Our Customers

This year, we are providing better information and resources to customers and communities before, during and after a Public Safety Power Shutoff (PSPS) event. These are events where we proactively turn off power to some customers based on weather forecasts and elevated wildfire conditions to protect life and property. We are working to reduce PSPS events by one third versus similar events in 2019. We are also delivering more assistance and outreach to help vulnerable customers.

To make PSPS events shorter in length, we are:

- Nearly doubling our exclusive-use helicopter fleet during events from 35 to 65.
- Using two airplanes with infrared cameras capable of inspecting transmission lines at night.
- Adding more field crews to speed up inspections.
- Investing in more reliable and innovative equipment, so our field teams can inspect, repair and restore power quickly.
- Utilizing mutual assistance from other utility companies to support PSPS restoration inspections when needed.

To make PSPS events smaller, we are:

- Installing more than 600 sectionalizing devices capable of re-directing power and limiting the size of outages so fewer communities are without power.
- Installing microgrids that use generators to keep the lights on for whole communities.
- Conducting targeted undergrounding as part of system hardening.

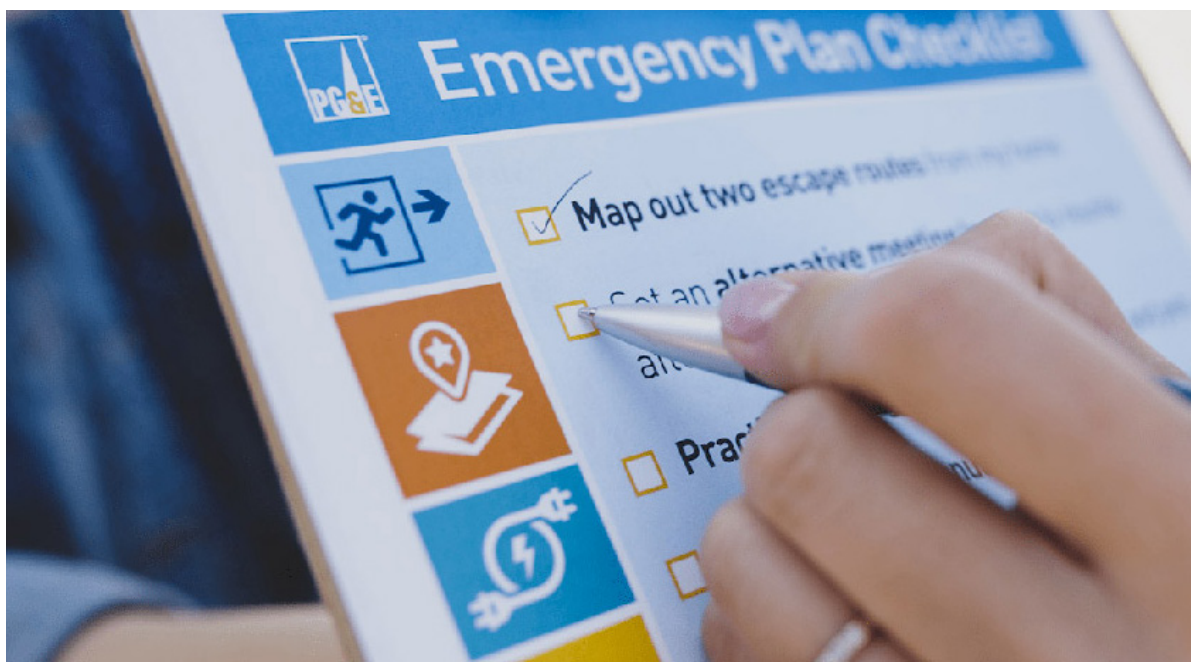
To make PSPS events smarter for our customers, we are:

- Improving our weather monitoring technology and installing new weather stations to more precisely predict the need for and timing of PSPS events.
- Installing high-definition cameras in high fire-threat areas to improve real-time monitoring of high-risk areas and conditions.
- Improving customer alerts with earlier estimates of restoration timing.
- Upgrading Community Resource Centers (CRCs) so that customers without power can have a place to go for charging and other basic needs. PG&E is adapting our approach to CRCs to reflect appropriate COVID-19 public health considerations. We are planning to offer micro CRCs (smaller, open air tents) and mobile CRCs (vans) to supplement hardened CRCs if shelter-at-home and physical distancing requirements are in place during PSPS events.
- Establishing a new collaborative working approach with cities, counties, tribes and critical service providers.
- Building a new, standalone cloud-based website specifically for emergencies. This includes revised content and tools for easier usability for customers.
- Partnering with the California Foundation for Independent Living Centers (CFILC) and other community-based organizations to provide resources for vulnerable customers and conduct outreach. These local affiliates can provide transportation, lodging or temporary generation, depending on need.
- Expanding in-language communications.

PG&E has reserved more than 450 MW of temporary mobile generation to be deployed in four ways to mitigate the impacts of PSPS events:

- Substation-sited temporary generation, for which PG&E is preparing 62 substations across its service area to receive temporary generation during the 2020 wildfire season
- Temporary microgrids for designated areas like “main street” corridors by rapidly isolating them from the wider grid and re-energizing them using temporary generation during an outage
- Community Resource Centers, where temporary generation may be needed
- Backup power support for individual facilities crucial to ensuring public safety

Additionally, our Humboldt Bay Generating Station (HBGS) can now provide power directly to customers, if needed, during emergencies, including PSPS events and other events outside Humboldt County that are impacting the county. Known as “islanding,” the re-configuring of the plant will allow portions of Humboldt County to be separated from the larger grid and energized exclusively from HBGS when transmission sources that import, export and stabilize power to nearby areas are impacted. Areas that can be powered by the HBGS include 20 cities and towns such as Eureka, Arcata, McKinleyville and Fortuna as well as some tribal communities.



PG&E conducts community wildfire safety outreach

We are listening to our customers about how we can do better by taking feedback and acting on what we hear. We are expanding our outreach efforts for this year to include:

- Additional informational resources, including videos, brochures and online tools, to help customers and communities prepare.
- Making it easier for eligible customers to join the medical baseline program.
- Additional outreach to customers in the medical baseline program, those with Access and Functional Needs, and master meter customers to address specific preparedness topics.
- Localized informational webinars to give customers and communities opportunities to ask questions and provide feedback.

PG&E is also utilizing the Safety Action Center, a dedicated safety webpage featuring helpful information about wildfire risks and what customers can do to keep their home, family or business safe, including tips on how to create an emergency plan, emergency preparedness guides and videos, and links to the statewide Power of Being Prepared campaign and other resources.

We all recognize the threat posed by COVID-19 and the need to prevent and mitigate the serious risk of catastrophic wildfires during extreme weather conditions. We are determined to do all we can to address both the impact of the COVID-19 pandemic and the threat of catastrophic wildfires. Our overriding goal is to ensure public safety.

Since the beginning of this pandemic, we have been focused on actions to ensure that the energy grid remains safe and reliable. We look forward to continued partnership with the communities we serve as we all adjust and respond to these unique challenges.

Serving Customers Locally

We maintain cross-functional leadership teams in each PG&E Division, led by local leaders, to address local issues, collaborate with representatives from across PG&E and incorporate the needs and concerns of our customers into operating decisions. In coordination with our centralized customer services functions, our local teams enable and facilitate critical gas and electric service work by performing project-related customer and community outreach and managing customer issues at the local level.

As part of PG&E's Plan of Reorganization, PG&E has committed to reimagine the organization—regionalizing our operations and infrastructure to enhance our focus on local communities and customers.

Integrating Feedback

PG&E regularly uses customer surveys, focus groups, online customer panels and other forms of research to obtain feedback and insights that help drive our decision-making and improvements in how we serve our customers. For example, PG&E established the People with Disabilities and Aging Advisory Council in 2020, an externally focused advisory council comprised of a diverse group of recognized leaders from community-based organizations who support our most vulnerable customer populations.



Photo of Pacific Gas and Electric Company's Tribal Liaison meeting with tribal leaders, tribal health facility leaders, the director of the California Rural Indian Health Board and the director of the Indian Health Service

Strengthening our Engagement with Tribes

PG&E is actively working with tribal governments to prepare their communities for PSPS events and obtain feedback from those that were impacted by prior events. After the 2019 PSPS events, PG&E held four group tribal listening sessions with 30 tribes in four counties and five individual listening sessions with tribal governments and two tribal health facilities to listen to concerns, gather feedback and improve coordination going forward.

Led by Pacific Gas and Electric Company's Tribal Liaison, PG&E is actively working with tribes in the following ways related to PSPS and emergency preparedness:

- Conducting Wildfire Safety Working Sessions with tribal, county and local governments. These are held at the county level and include all tribes geographically located within a county.
- Engaging with the California Rural Indian Health Board in their request of Congressional support to obtain funding for backup generation for all tribal health facilities in California.
- Coordinating with the Indian Health Service to conduct a needs assessment for tribal drinking water and wastewater systems, including identifying smaller, private drinking water systems on tribal lands that are not a part of the larger municipal tribal drinking water and wastewater systems.
- Participating in a California Governor's Office of Emergency Services (CalOES)-established working group, which includes the U.S. Environmental Protection Agency, Indian Health Service, U.S. Department of Agriculture and other electric investor-owned utilities, with a goal to identify funding for backup power for tribal drinking water and wastewater facilities.
- Seeking input from tribes to identify critical facilities within their jurisdictions, including identifying drinking water meters and health facilities, to improve PG&E's situational awareness of these systems during PSPS events and for earlier restoration, where possible.

Since the beginning of this pandemic, we have been focused on actions to ensure that the energy grid remains safe and reliable. We look forward to continued partnership with the communities we serve as we all adjust and respond to these unique challenges.

Photo taken Feb 2020

Saving Customers Energy and Money

PG&E offers a full portfolio of programs and incentives for energy efficiency, demand response, clean energy transportation and solar energy, as well as choice and control through rate options, financial assistance programs and other resources. We're building out a growing network of EV charging stations for workplaces and apartment buildings, as approved by the CPUC and have begun to build EV charging stations for customers with fleet vehicles.

Making It Easy

PG&E's website (www.pge.com) offers our customers an easy and convenient way to manage their account online—whether on their desktop computer, laptop, tablet or mobile phone.

The vast majority of our customers can view and download their hourly usage and cost data, in addition to comparing their usage to that of similar homes in their neighborhood. Our Home Energy Checkup and Business Energy Checkup tools allow our residential and small and medium business customers to find energy savings ideas by providing tips and savings recommendations to help them manage their energy costs.

Our energy statements provide clear and easy-to-understand information, and a growing number of our customers have chosen to enroll in our paperless billing option. We offer our customers a variety of payment options, including automatic payments by debit or credit cards. Customers can call or go to our website to learn how to pay online or to find nearby Neighborhood Payment Centers.

Our website also allows customers who are experiencing financial hardship to extend their payment due date or sign up for payment arrangements, if eligible. Customers can also enroll in longer-term financial assistance programs such as the California Alternate Rates for Energy (CARE) Program or the Family Electric Rate Assistance (FERA) Program, or sign up for our budget billing program that averages out their monthly payment amounts and helps them stay on budget year-round.

Customers can start, transfer or stop service via our website; they can also schedule appointments to relight their gas pilot lights online. Our website allows customers to sign up for numerous service-related alerts, including outage, billing and payment, and appointment notifications. Energy Alerts, also available, will notify customers when their energy usage is on the rise and allow them to use My Rate Analysis to make sure they're on the right rate plan.

In addition to digital offerings, PG&E continues to offer self-service capabilities over the phone, such as reconnection service via our Interactive Voice Response technology. Many of our communications are also available in multiple languages and formats, including English, Spanish, Chinese, Vietnamese, Tagalog, Braille and large print.

We have also enhanced our website and customer notifications to provide more timely, detailed and accurate information during PSPS events. Information will be available in 13 languages and upgraded outage maps will show impacted areas more clearly.

Measuring Progress

We are committed to improving satisfaction for both residential and business customers. 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.

Measuring Customer Satisfaction

	2017	2018	2019
Customer Satisfaction Score	75.6	77.3	72.6

1. To measure customer satisfaction, we use a random-sample, proprietary customer survey that is conducted quarterly by an independent third party. The customer satisfaction score is determined by averaging customers' overall satisfaction with our products and services using a 1 to 10 scale, indexed to a score from 1 to 100.

In 2019, PG&E began using a new metric for measuring the satisfaction of our customers. This metric tracks customer complaints that are escalated to the CPUC, and is now part of our Short-Term Incentive Plan. Our 2019 target was 12.2 complaints per 100,000 adjusted customers, and we achieved that goal with a 10.1 complaint rate for the year.

Each year, we also benchmark our customer satisfaction results against best-in-class performing gas and electric providers, using data from Escalent-Cogent utility benchmarking studies with both residential and business customers.



Customer Energy Efficiency

Energy efficiency is at the heart of energy sustainability, which is why PG&E has worked for more than four decades to support customer efforts to reduce their energy usage. Today, our commitment to helping customers save energy is stronger than ever. These programs help keep customer energy bills affordable, reduce energy load on the grid and meet California's clean energy goals.

In 2019, PG&E helped customers save more than \$300 million on their energy bills and avoid the emission of nearly 640,000 metric tons of carbon dioxide through our energy efficiency programs.

Our Approach

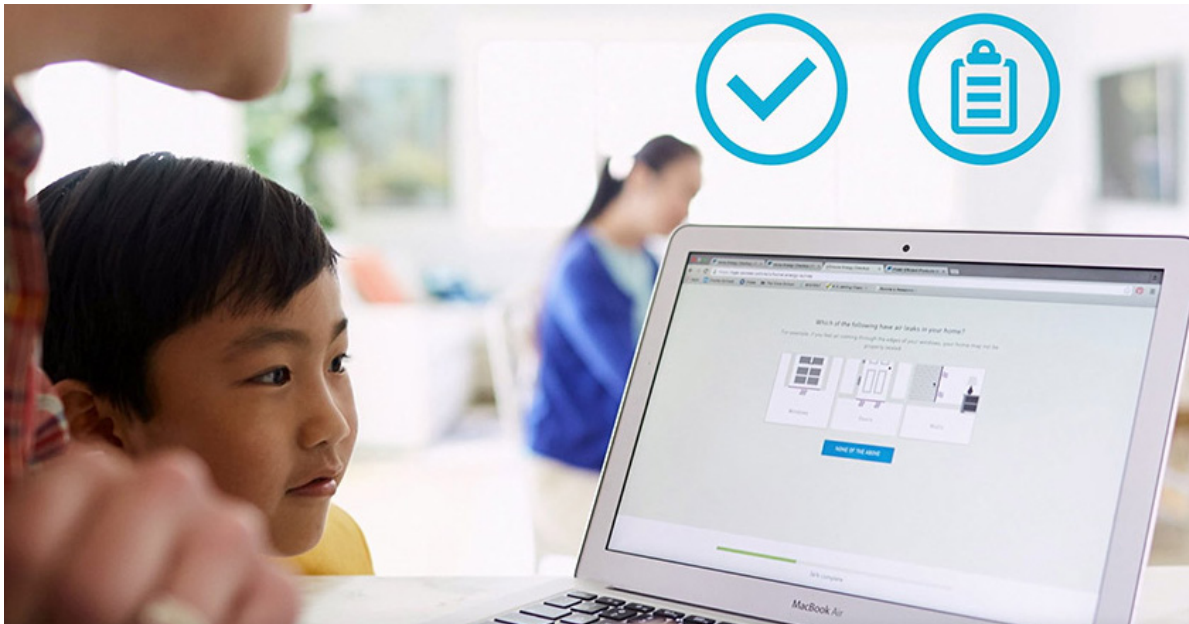
PG&E's energy efficiency programs are built on California's pioneering energy efficiency model, which has helped keep the state's per capita electricity consumption nearly flat since the 1970s. PG&E's portfolio is designed to reach all of our customers using a variety of channels, from self-service software tools to PG&E's business customer account representatives. To increase our impact, we also partner with state and local governments, community partners and third-party energy efficiency specialists.

We also operate two Energy Centers and support a Food Service Training Center, offering energy efficiency education and training programs for building professionals, including architects, designers, engineers, contractors and technicians.

Our energy efficiency priorities include:

- Working to reduce financial barriers for residential, commercial and government customers.
- Giving customers access to their data to support smart energy planning.
- Collaborating with retailers, distributors and others to increase the availability of high-efficiency products
- Advocating for stronger building codes and appliance standards and supporting compliance with existing codes and standards, while continuing to serve as California's statewide coordinator for utility initiatives and analyses on standards.
- Providing technical support for local governments that choose to exceed minimum requirements for state building codes.

- Maintaining our longstanding role in the nation's first interdisciplinary energy efficiency institute at the University of California Davis and in the best practices clearinghouse for energy efficiency and demand response at the Consortium for Energy Efficiency.
- Engaging communities through proactive outreach.



Helping customers save energy through the power of data

Feedback can be a powerful tool to help customers change their behavior and reduce energy usage. PG&E offered a range of programs in 2019 that helped customers save energy through insights into their own energy usage:

- Home Energy Reports, which are comparative energy usage reports for residential customers;
- Business Energy Checkup and Home Energy Checkup, which are online assessment tools that help customers understand their energy usage and offer tips on how to save; and
- Industrial Strategic Energy Management programs that involve industrial facility employees in tracking down energy savings opportunities and provide planning resources for future energy needs.

2019 Milestones

Highlights from our customer energy efficiency program in 2019 include:

- **Increased financial incentives for energy-efficient and resilient construction practices in homes rebuilt after wildfires.** As part of our broader efforts, PG&E is encouraging customers to build high-performing homes that will result in lower energy bills.
- **Expanded our energy efficiency financing program,** which provides commercial customers and government agencies with loans for energy efficiency upgrades with no out-of-pocket costs and zero interest. In 2019, the program funded 668 loans worth a total of \$59 million. Most loans went to small and medium businesses, and public organizations.
- **Supported California's goal for all newly constructed residential buildings to be zero net energy (ZNE) by 2020.** To do so, PG&E experts advocated for strong state and federal appliance standards and conducted research to support California's 2022 Energy Code rulemaking cycle. PG&E delivered training on existing codes and standards to more than 2,660 students and provided support to jurisdictions interested in adopting local reach codes that go beyond the state's current Energy Code and help achieve local greenhouse gas emission reduction goals.
- **Offered education and training** to architects and other building professionals to help them gain new skills and expertise in energy efficient design and construction at our three training centers, holding 580 classes, providing more than 100 technical consultations, and hosting more than 40 outreach events.



Fresno Grizzlies: Lighting the Way to Energy Savings

Chukchansi Park, home of the Fresno Grizzlies minor league baseball team, was experiencing a surge in their energy usage and needed help finding the source. Through PG&E's online account tools, they were able to identify that 15,000 more people visited the park than the previous year. To provide fans the best game experience while remaining energy-efficient, they partnered with PG&E and Electric Motor Shop for a lighting upgrade.

With about 2,000 lighting fixtures needed, the right partners were critical to get the job done in time for the upcoming baseball season. PG&E's zero percent financing option and the support of local partners made the upgrade a reality. This not only resulted in LED lighting and efficient fixtures throughout the ballpark, but a brighter guest experience and employee morale. The end result will save an estimated \$100,000 in energy costs annually.

Measuring Progress

PG&E continued to deliver significant energy savings in 2019, through programs that support individual customers to upgrade equipment or change behaviors, as well as work to improve building codes and appliance standards. While PG&E's total energy savings decreased in 2019 relative to the prior year, this was primarily driven by adoption of more-efficient equipment throughout our service area, as well as the success of long-term market transformation efforts in areas such as efficient lighting, which reduces the need for interventions to encourage customers to adopt efficient equipment.

Annual Energy Savings¹ From Customer Energy Efficiency Programs

	2018	2019
Gigawatt Hours (total)	1,288	1,253
Megawatts (peak)	343	253
Million Therms	30	27.6

1. Annual energy savings refer to the first-year impacts associated with installed customer energy efficiency projects. Savings are calculated on a net basis, which excludes savings that would have been achieved in the absence of energy efficiency programs. All data is as filed with the CPUC in Pacific Gas and Electric Company's Energy Efficiency Program Portfolio Reports and available on the CPUC's CEDARS website: <https://cedars.sound-data.com/upload/confirmed-dashboard/PGE/2019/>. Annual energy savings shown above include savings from codes and standards programs and savings from Regional Energy Network or Community Choice Aggregator programs in PG&E's service area, which represented approximately 1% or less of total annual savings.

Annual Avoided Emissions¹ from Customer Energy Efficiency Programs

	2018	2019
CO₂ Avoided (metric tons)	698,505	638,110
NO_x Avoided (tons)	192	189

1. Annual avoided emissions refer to the first-year net impacts associated with installed customer energy efficiency projects, including codes and standards programs but not including savings from Regional Energy Network or Community Choice Aggregator programs in PG&E's service area. Emissions avoided are calculated by the CPUC based on PG&E's detailed energy savings reporting and are available at <https://cedars.sound-data.com/reports/summary>. In May 2020, the CPUC corrected an error in emissions calculations for program years 2018 and 2019; the figures shown above reflect that correction.

Pacific Gas and Electric Company's Energy Efficiency Business Plan lays out a vision for our energy efficiency programs over the next 10 years in alignment with California's broader energy efficiency strategy. This includes changes in our approach to adapt to the state's Senate Bill (SB) 350 goals, which call for a doubling of energy efficiency, as well as efforts such as Assembly Bill (AB) 793, which incentivizes the installation of energy management technology for residential and commercial customers.

PG&E's plan for the future is built on three guiding principles:

1. Scaling energy efficiency in a cost-effective way,
2. Making energy efficiency offerings easier to access by streamlining our portfolio, and
3. Developing energy efficiency as a cost-effective grid resource that is integrated with other distributed energy resources—enabling deeper savings, greater penetration and location-specific efficiency.



Demand Response

PG&E's demand response programs enable customers to reduce energy use during periods of peak demand, providing a way for them to save or even earn money by adjusting their usage. By giving customers incentives to curtail usage, demand response programs provide grid stability, lower costs for customers and achieve greenhouse gas emissions reductions.

Our Approach

PG&E's demand response options are supported by SmartMeter™ technology, which helps customers better understand their energy usage and lower their energy costs. Our programs also help avoid the need for additional power plants that would only be called on for short periods throughout the year on days when demand is highest.

More than 170,000 residential customers participate in the programs we offer, along with more than 120,000 larger commercial and industrial customers. Programs for homes and businesses include:

Program	Description	
SmartRate	Gives residential customers a discounted rate throughout the summer, with the exception of 9 to 15 “SmartDays,” when their rates are higher because demand for electricity is high.	Approximately 67,000 customers participated in SmartRate and provided an average load reduction of nearly 13 megawatts (MW) per event day.
SmartAC	Allows PG&E to send a signal to a PG&E-provided device on a customer's air conditioner, cycling the air conditioner to use less energy. The program is offered May through October.	Approximately 100,000 participants provided about 49 MW of potential load reduction, which was bid into the California Independent System Operator (CAISO) wholesale market as a Proxy Demand Resource but can also be called on for emergencies and near-emergency purposes by the CAISO or PG&E's grid and system operators.
Peak Day Pricing	Provides non-residential customers with discounted rates from May through October. In exchange, prices are higher for energy used during designated peak “Event Days” (9 to 15 per year) and times, to discourage energy usage on those days.	More than 115,000 customers participated in Peak Day Pricing.
Capacity Bidding Program	Works with third-party demand response companies that aggregate customers. These aggregators—and, by extension, the customers in their portfolios—act as “virtual power plants” and receive payments from PG&E in exchange for reducing load on peak usage days.	Approximately 700 active customers provided about 30 MW of potential load reduction, which was bid into the CAISO wholesale market as an economic Proxy Demand Resource between May and October.
Base Interruptible Program	Enables participating customers—typically large customers—to receive financial incentives in exchange for their commitment to reduce energy usage during emergencies in response to requests from PG&E, which helps ensure grid reliability.	PG&E attained a load reduction potential of about 310 MW, which was bid into the CAISO wholesale market Reliability Demand Response Resource product year-round to respond to grid emergencies.
Automated Demand Response (AutoDR)	Provides rebates for residential demand-reducing smart thermostats and provides funding for demand-reducing equipment for non-residential customers where the equipment is capable of receiving a signal from PG&E to initiate a series of automatic, customer-defined and pre-authorized actions during demand response events.	PG&E provided incentives to 14 customers totaling 2.6 MW of new load shed committed.

2019 Milestones

In 2019, we leveraged our programs on numerous occasions to reduce demand and ensure reliable electric service for customers.

This included a new option for our Capacity Bidding Program that ties demand response events directly to the price of energy in California's wholesale energy market. Each aggregator in the program determines the price at which they are willing to have their customers participate in a demand response event, enabling aggregators to tailor offerings to their customers while also encouraging demand response to be used in a manner that can help alleviate high prices.

In addition, we deployed two-way communicating load control switches over the SmartMeter network. This approach ensures greater reliability in delivering on the energy forecast into the market and can provide near real-time visibility at the individual customer level.

Measuring Progress

Through our demand response programs, PG&E and our customers had the ability to provide up to 400 MW of load reduction in 2019—about the capacity of a large conventional power plant.



Distributed Generation and Storage

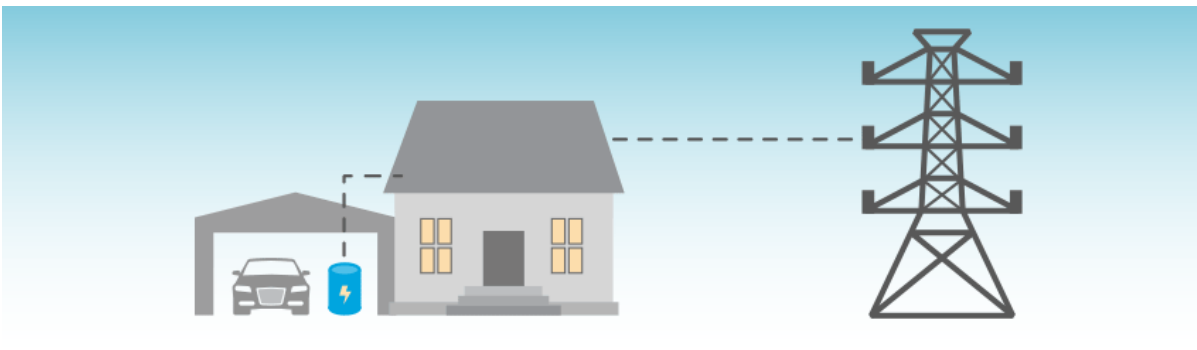
Distributed energy resources, such as rooftop solar and customer battery storage, play a key role in California’s clean energy future by allowing customers to have more control over the energy that powers their lives.

Our Approach

PG&E is committed to expanding the use of clean distributed energy options to meet customer energy, resiliency, and affordability needs, while supporting California’s greenhouse gas reduction and other environmental goals.

PG&E provides a variety of tools and resources for customers who want to use solar energy, other distributed generation, and storage. Our website provides information on the process of adopting solar and helps customers determine if solar is right for them. PG&E also offers incentive programs for low-income solar, solar thermal water heating, fuel cells, wind and battery storage.

Customers who want to invest in solar, but are unable to install on-site generation, can enroll in PG&E’s community renewables programs, which give customers the option to purchase up to 100 percent of their electricity from a program generating solar power within California.



Offering Incentives for Battery Storage

As Pacific Gas and Electric Company and other California utilities have implemented Public Safety Power Shutoffs to manage increasing wildfire risk, more customers are looking to battery storage for backup power. PG&E is facilitating adoption of battery storage through the statewide Self Generation Incentive Program (SGIP). Vulnerable customers, such as those who live in high fire risk areas or rely on medical equipment, are eligible for incentives that cover nearly the full cost of an installed battery system.

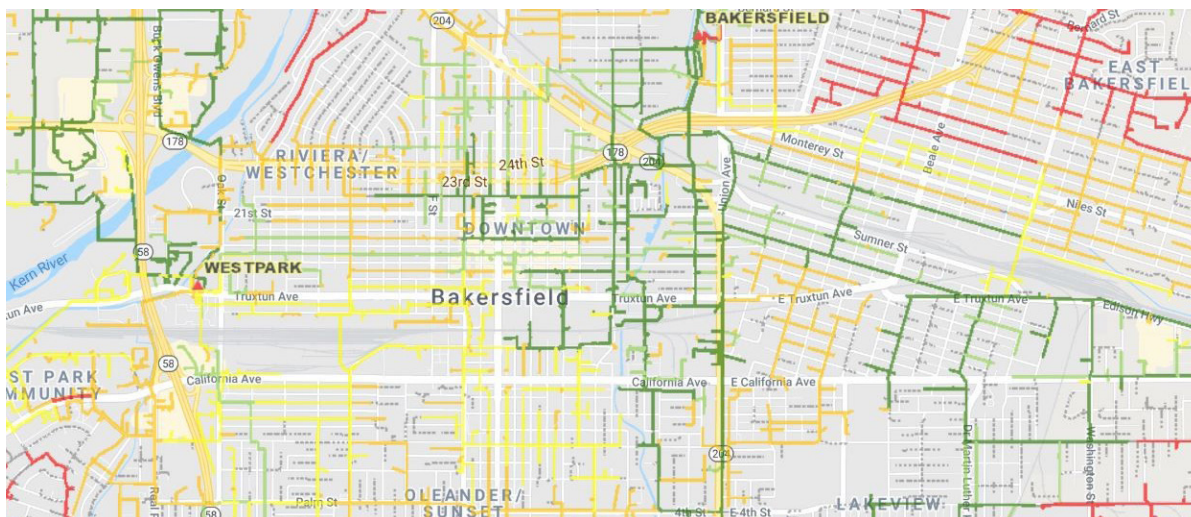
2019 Milestones

In 2019, PG&E reached a milestone of nearly 465,000 customer solar systems—more than 4,400 megawatts (MW)—connected to PG&E's electric grid. During the year, PG&E connected 60 percent of customer solar systems to the electric grid within three days.

An increasing number of customers are adding storage to their solar systems or installing stand-alone storage. As of year-end 2019, there were more than 8,000 customers with battery storage at their homes or businesses (125 MW of capacity). In 2019, installed customer storage capacity more than doubled compared to 2018.

In addition to facilitating solar adoption, PG&E continued to support clean energy technologies through direct incentives and customer education:

- **Supported emerging distributed technologies.** As of year-end 2019, PG&E had provided financial incentives for more than 4,200 projects through the Self-Generation Incentive Program, representing \$668 million in incentives and approximately 350 MW of capacity for energy storage, fuel cells, wind turbines, biomass and other distributed generation technologies.
- **Supported customer solar water heating.** We provided average incentives of about \$3,400 each to single-family residential solar water heating projects, and an average of \$54,000 for multi-family residential and commercial solar water heating installations. These incentives have helped support nearly 2,200 gas-offsetting projects of all types since the program's inception, which, in total, are expected to avoid more than 2.1 million natural gas therms annually. The solar water heating program is scheduled to run through July 31, 2020 or until the budget of \$250 million is exhausted, whichever occurs first, though state legislation may further extend the program.
- **Raised customer awareness of solar power and other clean generation and storage technology options.** Through our Pacific Energy Training Center, we offered a wide range of training opportunities on solar and other technologies for different audiences and education levels, both live and simulcast. We held 44 classes on solar and other technologies in 2019 with nearly 1,500 attendees in total.



PG&E's Integration Capacity Analysis map showing downtown Bakersfield. Yellow and green lines indicate distribution system line sections with reported integration capacity above 1 MW. Orange lines indicate line sections with reported integration capacity of up to 1 MW. Red lines indicate circuits with no reported integration capacity.

Refreshed Data Portal Reflects Increased DER Integration Capacity

Since 2016, Pacific Gas and Electric Company and California's other investor owned utilities have provided contractors and developers with online access to maps designed to help them find potential project sites for distributed energy resources (DERs), such as solar and energy storage.

PG&E has refreshed the maps—reflecting an increase in the posted DER integration capacity of our electric distribution system. The maps are accessible at PG&E's Distributed Resource Planning Data Portal, and show hosting capacity, grid needs and other information about PG&E's electric distribution grid.

Measuring Progress

PG&E's service area has seen consistent growth in customer solar adoption in recent years, averaging more than 60,000 interconnected solar systems per year over the last five years.

PG&E Interconnected Customer Solar Systems by Year

Total Solar Interconnections = Nearly 465,000			
1993 – 2000	139	2010	10,413
2001	508	2011	13,513
2002	1,082	2012	17,544
2003	1,628	2013	29,087
2004	2,993	2014	45,384
2005	2,638	2015	65,479
2006	4,110	2016	67,847
2007	6,301	2017	56,182
2008	6,542	2018	59,183
2009	9,019	2019	65,871



Clean Transportation

PG&E is committed to providing clean transportation programs and incentives that are affordable and easy to use—and that help California meet its clean air and greenhouse gas emission reduction goals. We continue to actively support the state's goals of five million zero emission vehicles (ZEV) on the road by 2030, supported by 250,000 charging stations, including 10,000 fast chargers, and 200 hydrogen fueling stations statewide by 2025.

Our Approach

PG&E is actively engaged in projects to expand electric vehicle (EV) charging infrastructure and simplify EV ownership. This includes collaborating with automakers, charging equipment providers and state programs to support the large-scale electric infrastructure needed to incorporate EV charging systems into the energy grid. We offer electric rate plans tailored for customers who drive EVs and we support test-drive events to help customers understand the benefits of EVs.

- PG&E's three-year EV Charge Network program calls for installing up to 7,500 Level 2 charging ports throughout PG&E's service area at multi-unit dwellings and workplaces. PG&E pays for the infrastructure to supply electricity to each EV parking space, and for a portion of the charging equipment. At least 15 percent of the units will be located in disadvantaged communities.
- Our EV Fleet program was created to expand PG&E's charging infrastructure programs to medium- and heavy-duty fleets. Our goal is to convert 700 sites to electric fleet vehicles by 2023 to support the adoption of 6,500 medium- and heavy-duty electric vehicles. PG&E will dedicate 25 percent of the program budget to investments in disadvantaged communities.
- EV Fast Charge enables public fast charging—with PG&E paying for and building the infrastructure from the electric grid to the charging equipment for public fast chargers, complementing state and privately-funded initiatives. One-quarter of the fast chargers will be located in disadvantaged communities.
- Our new EV Schools and Parks program will invest \$12 million over two years in charging infrastructure at schools and state parks.
- Our Empower EV program will support targeted community outreach to provide EV education and rebates for EV chargers and installation for income-qualified residential customers. The program will total \$4 million over two years.

We also participate in California's Low Carbon Fuel Standard (LCFS) program, which aims to lower the carbon impact of California's transportation fuels by 10 percent by 2020. PG&E's Clean Fuel Rebate Program provides an \$800 rebate for electric vehicle owners, and on-bill credits for drivers of compressed natural gas (CNG) vehicles.

2019 Milestones

Highlights of our work to transition customers to clean fuels include:

- **Continued construction of new charging stations under the EV Charge Network program.** PG&E has installed approximately 2,300 Level 2 charging ports at workplaces and multi-family dwellings through the EV Charge Network program, which reduces much of the upfront cost for customers deploying charging stations. PG&E will continue implementing the \$130 million program in 2020.
- **Launched the EV Fleet and Fast Charge programs.** The programs expand PG&E's charging infrastructure programs to medium- and heavy-duty fleets and public fast charging. PG&E completed construction on the first five sites in support of medium- and heavy-duty vehicle fleet customers.
- **Received regulatory approval** for EV Schools and Parks (to invest in charging infrastructure at schools and state parks) and Empower EV (to provide EV education and rebates for EV chargers and installation for income-qualified residential customers).
- **Received approval of new rate structures to accelerate transportation electrification.** PG&E's commercial EV rate will make charging costs more consistent and affordable for businesses with EV charging like workplaces, fleets and public fast charging sites. The new rate creates a subscription-style structure, similar to a cell phone data plan, with simpler time-of-use periods than existing commercial rates.
- **Promoted awareness of EV cost savings.** Expanding our suite of online customer tools, PG&E developed an EV savings calculator where drivers can explore available EV models, learn about incentives to reduce the cost of the vehicle and help determine the best rate plan to fuel their EV.

Measuring Progress

The number of cumulative EV registrations in PG&E's service area reached nearly 275,000 in 2019, as PG&E estimates approximately 10 percent of new vehicle sales in PG&E's market were electric. PG&E is aiming to support more than 2 million clean-fuel vehicles by 2030.

PG&E maintains a network of 24 CNG vehicle refueling facilities that are open to customers—refueling approximately 3,000 vehicles and fleets with about 1.4 million gallon equivalents each year.

Plug-In Electric Vehicles in PG&E's Service Area¹

	Approximate Number of EVs
2013	30,348
2014	57,772
2015	78,490
2016	111,232
2017	150,659
2018	216,845
2019	274,356

PG&E-Supplied Natural Gas Consumed by the Transportation Sector¹

	Bcf of natural gas consumption
2015	2.02
2016	1.38
2017	2.39
2018	1.99
2019	1.81

1. Based on PG&E reporting data to the California Air Resources Board (CARB).

1. Electric Power Research Institute, based on external registration data, 2019.



Energy Affordability

At PG&E, we're committed to providing affordable energy to all of our customers. One important tool is our wide range of energy efficiency programs, which help customers reduce their energy use and save money. We also offer several financial assistance programs to help customers who are facing financial challenges, who live in disadvantaged communities or who face issues of environmental and social justice.

Our Approach

Energy efficiency programs play an essential role in energy affordability. Pacific Gas and Electric Company's website includes an extensive set of energy-saving tips and lists of appliances and equipment that are eligible for rebates. It also provides tools, like Home Energy Checkup and Home Energy Reports, that help customers analyze their usage and pinpoint ways to save.

PG&E is also transitioning toward a new program model that will result in an updated portfolio of energy efficiency programs by 2020 that are proposed, designed and delivered by third parties. The goal of the initiative is to scale energy efficiency cost-effectively and make energy efficiency offerings easier to access for customers.

In addition, PG&E works closely with customers facing financial challenges so they can continue to receive gas and electric service. PG&E supports programs designed for those in need, including:

- The California Alternate Rates for Energy Program (CARE), which offers a monthly discount on energy bills for income-qualified households and housing facilities. Qualified households can save up to 35 percent or more on their energy bills.
- Budget Billing, which spreads costs out evenly over the year and eliminates swings in customers' monthly energy bills caused by seasonal changes in usage.
- The Relief for Energy Assistance through Community Help (REACH) plan, which pays up to \$300 of the energy bill for income-qualified customers experiencing a crisis that prevents them from paying their gas or electric bill. This assistance program, funded in part with charitable dollars from PG&E Corporation shareholders, is administered by Dollar Energy Fund.
- The Family Electric Rate Assistance (FERA) Program, which provides a monthly discount on electric bills for income-qualified households of three or more people.

In addition, discounts are available for customers that have special energy needs due to certain qualifying medical conditions.

PG&E also offers an Economic Development Rate to businesses considering locating in California, relocating from California to other states or closing their existing California operations.

2019 Milestones

In 2019, we continued to aid customers in need through our financial assistance programs:

- **CARE:** About 1.4 million customers, or 95.5 percent of those who were eligible, received discounts through the CARE program in 2019. Since the program's inception in 1989, PG&E CARE customers have saved more than \$10 billion on their energy bills.
- **Budget Billing:** Approximately 186,000 customers participated in the Budget Billing program in 2019. This program helps customers with high seasonal bills even out their energy payment so that they are more manageable.
- **FERA:** Approximately 21,000 customers, or 13 percent of those who were eligible, received discounts through the FERA program in 2019. Since the program's inception in 2004, PG&E FERA customers have saved more than \$67 million on their energy bills.
- **REACH:** More than \$1.2 million in emergency assistance funds were distributed to 4,938 customers in 2019. The REACH program was established in 1983, and since 2014, the program has provided more than \$12 million to 45,474 customers.

We continue to contribute to local economic and community vitality through our economic development rate. Sixty-five companies have signed up for the rate since 2014, creating more than 9,000 local jobs and enhancing economic vitality in communities across PG&E's service area.

Measuring Progress

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.

Home Weatherproofing Improvement Projects through Energy Savings Assistance Program

2007	63,319	2014	123,539
2008	61,034	2015	100,573
2009	81,308	2016	74,319
2010	133,329	2017	87,052
2011	128,071	2018	85,168
2012	115,229	2019	106,064
2013	123,566		

Average PG&E residential bills for gas and electric service remain below the national averages, according to figures compiled by leading trade associations.

The average PG&E residential electric customer paid \$87.72 per month, which was about 21 percent less than the national average of \$111.07. Data is from 2018, the most recent year for which comparative data is available.

The average PG&E residential gas customer paid \$40.12 per month, which was about 33 percent less than the national average of \$59.58.

Average Monthly Electric Bills¹ (2018)

U.S. Average	\$111.07
PG&E²	\$87.72
Mountain	\$96.17
Pacific	\$99.67
East North Central	\$101.08
Middle Atlantic	\$101.92
West North Central	\$110.33
West South Central	\$113.83
New England	\$125.58
South Atlantic	\$126.92
East South Central	\$137.00

1. Source: Edison Electric Institute, 2018 Statistical Yearbook

2. Source: FERC Form 1

Average Monthly Gas Bills¹ (2018)

U.S. Average	\$59.58
PG&E²	\$40.12
Pacific	\$42.58
Mountain	\$43.17
West South Central	\$47.58
East South Central	\$53.17
South Atlantic	\$59.33
West North Central	\$63.58
East North Central	\$65.33
Middle Atlantic	\$83.67
New England	\$108.33

1. Source: American Gas Association, 2018 Gas Facts

2. FERC Form 2 for Pacific Gas and Electric Company, for 2018



Community Investments

At PG&E, we are dedicated to building and maintaining charitable partnerships with non-profit organizations, local and tribal governments and others to address critical social, educational and environmental challenges in the communities we serve.

Our programs continue to support enhancements in resiliency in the face of disaster, with the goal of helping to ensure the state’s critical social safety net is robust and available when emergencies strike. Our charitable contributions programs are funded entirely by our shareholders and have no impact on our customers’ energy rates.

Our Approach

The Better Together Giving Program provides grants each year to 501(c)(3) nonprofit organizations, schools, and local and tribal governments across Northern and Central California. This support can come from PG&E or from The PG&E Corporation Foundation, and generally focuses on five areas: emergency preparedness and safety, economic and community vitality, education and workforce development, the environment and employee engagement.

Community contributions are focused on providing assistance to underserved communities, such as low-income individuals, communities of color, the long-term unemployed, women and girls, veterans, senior citizens, people with disabilities and members of the lesbian, gay, bisexual, transgender and queer (LGBTQ) community.

2019 Aggregated Contributions by Charitable Focus Area

Category	Percentage of Overall Charitable Spending
Emergency Preparedness and Safety	30%
Economic and Community Vitality	18%
Education and Workforce Development	14%
Environment	10%
Employee Engagement	28%

2019 Milestones

Emergency Preparedness and Safety

The primary focus of charitable programs in 2019 was to support Northern and Central California communities in preparing for potential disasters and to respond quickly with support when disasters occurred.

- **Community Preparedness Support.** The PG&E Corporation Foundation continued support of the American Red Cross Ready Neighborhoods program. With this support, the Red Cross was able to provide vital fire and emergency preparedness training and outreach and education to some of the most vulnerable communities.
- **Wildfire Preparedness.** PG&E awarded a \$1 million grant to the California Fire Foundation to support local fire departments and the California Professional Firefighters to promote emergency preparedness and safety. The California Fire Foundation provided these funds to 28 fire departments in high wildfire threat areas to help implement safety programs.
- **Partnerships with Local Non-Profits.** PG&E made charitable contributions to 31 local community-based organizations (CBOs) in high wildfire threat areas with funding to promote safety in their communities. As a result, each of the CBOs provided multi-language safety messages via social media and reached over 700,000 residents.
- **211 Program Resources.** The 211 Program is a valuable resource in connecting community members to important relief and support resources in the event of emergencies. A robust 211 network also provides relief to 911 operators handling potentially life-threatening emergencies. In 2019, PG&E launched a program with non-profit organizations that support 211 in northern California, including working with Interface Family Services to support the expansion of 211 services to 12 counties in high wildfire threat areas.

Education

PG&E and The PG&E Corporation Foundation continue to support science, technology, engineering and math (STEM) education initiatives in our communities with funding for programs aiming to help ensure all students have access to quality education, including support for higher education attainment. To help students succeed, PG&E and The PG&E Corporation Foundation support California students with STEM-related scholarships and grants.

- **Better Together STEM Scholarships.** Twenty-five students received awards of \$1,000 to \$10,000 focused on majors in engineering, computer science and information systems, cybersecurity, and environmental sciences. Since 2012, the Better Together STEM Scholarship Program has awarded more than \$4.3 million.
- **Better Together Investing in California Youth.** The PG&E Corporation Foundation continued its support for two programs targeting academic success in traditionally underserved communities in northern California: Oakland Promise is a cradle-to-career program supporting youth in under-resourced schools in Oakland and Stockton Scholars aims to reduce social and financial barriers to higher education for youth in the city of Stockton by promoting college readiness.

Economic and Community Vitality

PG&E and The PG&E Corporation Foundation support job creation and career training opportunities, provide support for local businesses, offer energy assistance to low-income families and promote equity through access to opportunity to improve the quality of life in the communities we serve.

- **Summer Programs for Youth.** More than \$1 million in charitable contributions was provided to programs supporting the advancement of youth in our communities, including partnerships with local Boys & Girls Clubs, the California Skills Association, Junior Achievement, Aim High and The Oakland Zoo, and others focused on career awareness and job training opportunities. Through these programs in 2019, PG&E provided more than 300 youth with paid summer internships, and more than 1,000 youth with workforce readiness training.

- **Opportunities in Diversity.** Longstanding support for local, regional and statewide diverse chambers of commerce and minority supplier programs enhancing equity and opportunities for women, people of color, native peoples, LGBTQ and veteran Californians has been a cornerstone of PG&E's economic and community vitality programs. In 2019, PG&E and The PG&E Corporation Foundation invested more than \$250,000 in programs like the Western Region Minority Supplier Development Council, Golden Gate Business Alliance, Women Business Enterprise Development Council, the California Hispanic Chamber of Commerce Foundation, and others.

Environment

PG&E and the PG&E Corporation Foundation fund environmental programs promoting renewable energy, fostering energy efficiency and protecting our environment including parks, recreation areas and natural habitats.

- **Resilient Communities.** PG&E and The PG&E Corporation Foundation have invested \$1.2 million over the last three years in shareholder-funded grants to support local initiatives to build greater climate resilience via our Better Together Resilient Communities grant program. In 2019, PG&E focused on grant proposals that will help communities prepare for and respond to the increased threat of catastrophic wildfires in California. PG&E and The PG&E Corporation Foundation awarded \$100,000 each to The Hopland Band of Pomo Indians, Ag Innovations, New Paradigm College and Pepperwood Preserve.

Employee Engagement

PG&E’s employees are active members of the communities where they live and work. In recognition of their commitment, employees have several ways to get involved in community investment on a local level:

- PG&E’s **Community Service Award Program** provides employees and retirees who volunteer more than 25 personal service hours with a grant of \$350 on their behalf to a qualifying nonprofit organization of their choice.
- PG&E’s **Employee Resource Groups (ERGs)**—representing different aspects of PG&E’s diverse workforce—can direct funding to community groups and activities that reflect their interests and priorities.
- Through The PG&E Corporation Foundation’s **Matching Gifts Program**, eligible gifts from PG&E employees, retirees or current members of the PG&E Corporation Board of Directors are matched, dollar-for-dollar, up to \$1,000 per calendar year per individual. In 2019, the program matched approximately \$4.2 million for individual contributions.

Measuring Progress

In 2019, PG&E and The PG&E Corporation Foundation provided 735 community-based organizations with an aggregate total of \$17.5 million in charitable contributions. Although a reduction from prior years’ programs, made in light of PG&E’s current financial circumstances, this commitment remains significant and reflective of our dedication to a sustainable, inclusive and resilient future for all Californians.

Review our annual report recording the results of our charitable programs and community engagement efforts for the year.

2019 Support for Vulnerable Communities*

Contributions awarded to underserved communities	74%
Contributions awarded to low-income communities	65%
Contributions awarded to communities of color	75%

* The above percentages are not mutually exclusive and are self-reported by the recipient organizations.



Supplier Diversity

For nearly 40 years, working with small and diverse-owned businesses has been key to PG&E's mission to provide safe, reliable, affordable and clean energy. Building a diverse supply base is an essential component of our commitment to better serve our customers and to contribute to economic development, local jobs and vibrant and diverse communities.

Our Approach

PG&E is committed to cultivating an inclusive supply chain for diverse business enterprises (DBEs)—small businesses and businesses owned by women, minorities, service-disabled veterans and LGBTQ individuals. We collaborate internally across all business units and with the public and private sector, including community-based organizations and diversity advocacy groups, to help grow DBEs and empower them to succeed in today's economy. We host technical assistance workshops and training sessions to help diverse suppliers operate more safely, securely and sustainably.

Championing Diverse Suppliers

Within PG&E, a group of supplier diversity champions, with the support of senior leadership, set annual supplier diversity goals, monitor progress, and participate in ongoing supplier development and outreach. This group of engaged employees also meets regularly with the supply chain responsibility and sourcing teams to discuss cross-functional strategies to achieve their goals.

At diverse business community events, we are represented by supply chain responsibility staff and volunteer outreach ambassadors, who share information about how to do business with PG&E.

Focusing on Small Businesses

To support small businesses, PG&E hosts workshops and training sessions throughout the year. We collaborate with many small and diverse business community partners, including the U.S. Small Business Administration, to hold capacity-building training seminars.

Encouraging Prime Suppliers to Participate in Supplier Diversity

We encourage our prime suppliers to develop a supplier diversity plan, set a supplier diversity performance goal, accurately report on diverse subcontracting and provide updates on progress toward their goal.

In 2019, our Prime Supplier Academy celebrated its fifth year of success in delivering supply chain responsibility training to PG&E suppliers. The Academy provides resources and tools to assist prime suppliers with increasing engagement in and ownership of their own supplier diversity initiatives, as well as environmental sustainability and supplier code of conduct initiatives. In addition to in-person workshops, Academy curriculum includes monthly webinars that focus on how to develop a supplier diversity plan and how to report and track diverse subcontracting spending.

Supporting the Competitive Success of Diverse Businesses

PG&E offers a wide variety of Technical Assistance Program initiatives designed to strengthen diverse suppliers, many in collaboration with community organizations. Among other things, these initiatives help diverse suppliers build their business acumen and include scholarship opportunities for the UCLA Management Development for Entrepreneurs Program, University of Washington Minority Business Executive Program, Stanford Latino Entrepreneurship Initiative, Tuck Minority Business Programs at Dartmouth and U.C. Berkeley financial management program.



Through our Technical Assistance Program, PG&E conducts workshops each year to support the competitive success of the diverse business community through the following training initiatives:

- **Diverse Suppliers are Safe**, launched in 2012, educates diverse suppliers on developing and improving their safety plans.
- **Diverse Suppliers are Cyber-Secure**, launched in 2014, raises cybersecurity awareness and offers approaches that a small business can take to cost-effectively assess its vulnerabilities and reduce risks.
- **Diverse Suppliers Go Green**, launched in 2010, instructs participants on how to develop an environmental policy, assess their environmental impacts and create a plan to reduce those impacts. Workshops also explore how business strategies that include environmental sustainability can reduce costs and improve business operations.
- **Business Tune Ups for Diverse Businesses**, launched in 2017, helps DBEs become more competitive and explore strategies for operational efficiency. Workshop topics include process improvement, risk management and business continuity.
- **Future-Proofing Your Business**, launched in 2017, addresses some of the disruptive forces driving rapid change in business. Mini-hackathons between DBEs, corporations, and prime suppliers elicit new thinking on how to promote the inclusion of diverse suppliers in rapidly evolving technology.
- **How to Successfully Participate in Strategic Sourcing Webinar Series**, launched in 2018, covers what to expect during the strategic sourcing process with PG&E.

Photo taken 2019

2019 Milestones

Highlights from 2019 include:

- **Actively engaged diverse suppliers in trade shows and conferences.** We expanded our inclusion efforts to six industry trade shows and three supplier diversity conferences, distributing more than 30 diverse supplier registration scholarships. The supply chain responsibility team planned pre-trade show prep calls, acted as guides at the conferences and facilitated business introductions.
- **Expanded capacity-building training to small businesses.** We hosted or participated in more than a dozen small business-focused trainings and workshops—from Technical Assistance Program workshops to training on how to do business with utilities.
- **Increased inclusion efforts with Lesbian, Gay, Bisexual, Transgender Business Enterprises (LGBTBE).** We expanded our collaborations with local and national LGBTBE organizations, encouraged these suppliers to pursue certification and facilitated introductions with our business unit decision-makers. As a result, we increased our spending from \$2.5 million in 2018 to \$17.6 million in 2019, working with 11 LGBTBEs as direct and subcontracting suppliers.



PG&E actively participates in local, state and national supplier diversity events to meet with diverse suppliers and share information about how to do business with PG&E.

Photo taken 2019

Measuring Progress

In 2019, PG&E spent \$3.41 billion with diverse suppliers, representing 41.15 percent of our total procurement expenditures. This was the eighth consecutive year that we exceeded \$2 billion and the 14th consecutive year Pacific Gas and Electric Company exceeded the California Public Utilities Commission's goal of 21.5 percent.

Highlights of PG&E's spending with diverse suppliers included:

- Minority-owned business enterprises: \$2.01 billion
- Woman-owned business enterprises: \$1.0 billion
- Service-disabled veteran-owned business enterprises: \$299 million
- LGBTQ-owned business enterprises: \$17.6 million

5-Year Supplier Diversity Trend (Calendar Year)

Category	2015	2016	2017	2018	2019
Total DBE spending \$ (millions)	\$2,468	\$2,851	\$2,579	\$2,982	\$3,409
Total DBE % (based on total spending)	44.0%	44.4%	42.3%	41.4%	41.2%

Supplier Diversity and Small Business Results (percent of total spending)

Category	2017 (%)	2018 (%)	2019 (%)
Minority Men	16.9	17.4	16.2
Minority Women	8.6	8.0	9.0
Minority Business Enterprise	25.5	25.4	25.2
Women Business Enterprise (WBE)	11.7	11.5	12.1
Lesbian, Gay, Bisexual, Transgender Business Enterprise (LGBTBE)	0.02	0.03	0.02
Service-Disabled-Veteran Business Enterprise (DVBE)	5.1	4.5	3.6
Total DBE	42.3	41.4	41.2
PG&E Target (%)	42.0	40.0	38.0
Non-Diverse Small Business	5.4	7.2	11.9
Grand Total	47.7	48.6	53.1

Spending	2017 (\$ millions)	2018 (\$ millions)	2019 (millions)
Supplier Diversity Spending	2,579	2,982	3,408
Non-Diverse Small Business Enterprise Spending	330	520	664
Total Diverse and Small Business Spending	2,909	3,502	4,072



Employees

Key Sustainability Indicators

93%

Percentage of PowerPathway graduates hired into industry jobs

71,000 hours

Number of employee volunteer hours

Every day, approximately 23,000 PG&E employees are hard at work: putting our plans into action, finding new ways to meet the needs of our customers, and strengthening our energy systems to deliver safe, reliable, affordable and clean energy. We remain focused on building and retaining an engaged, well-trained and diverse workforce ready to meet the challenges of our business today and into the future.

Highlights

Established a new Wildfire Safety organization, comprised of former firefighters, experts in vegetation management, meteorologists and other personnel.

Demonstrated our commitment to communities with employees contributing nearly 71,000 employee volunteer hours to schools and nonprofit service organizations.

Achieved more than \$7 million in pledges from employees in our annual Campaign for the Community.

Delivered more than 670,000 hours of technical, leadership and employee training.

Continued to provide career opportunities for veterans and women through our Power Pathway™ workforce development program.

Engaged employees through our 11 Employee Resource Groups and three Engineering Networks across 27 chapters to promote diversity and inclusion, employee development and community service.

Continued to earn recognition for our commitment to diversity and inclusion, including rankings from the Human Rights Campaign, Disability Equality Index, *Black Enterprise* magazine, and *Latina Style* magazine.



Building the Workforce of the Future

PG&E is dedicated to cultivating an environment where employees are empowered to speak up about safety and other important issues; offer ideas for how to make PG&E a better place to work; learn and grow in their careers; and connect with the communities where they live. We are committed to engaging with employees so that they understand and apply PG&E's Mission, Vision and Culture to help better serve our customers.

Our Approach

To build employee engagement, we have both executive-level and employee-led initiatives and programs.

- Our executive team meets regularly to discuss and evaluate the state of our talent, determine which programs are driving engagement and performance, and clarify the specific skills, behaviors and values we should cultivate in our current employees and seek in future recruits.
- Other initiatives focus on safety, wellness and environmental leadership. Approximately 5,500 employees participate in our Employee Resource Groups (ERGs), each of which contributes to building an inclusive culture that ensures our employees' voices are heard and valued.

In addition, every year, we honor employees whose work embodies our highest values—such as safety, diversity and inclusion, environmental leadership, and community service—in our annual Employee Champions Awards ceremony. The event also features the Margaret Mooney Award for Innovation, which recognizes individuals and teams who apply innovative solutions to their work.

Approximately 60 percent of PG&E employees are covered by collective bargaining agreements with three labor unions: the International Brotherhood of Electrical Workers (IBEW) Local 1245, the Engineers and Scientists of California/International Federation of Professional and Technical Engineers (ESC/IFPTE) Local 20, and the Service Employees International Union (SEIU) United Service Workers West. A negotiated labor agreement with each union establishes the working rules and other terms and conditions of employment.

Finally, we drive engagement through employee volunteer and giving programs that support deserving local organizations.

2019 Milestones

- **Established a new Wildfire Safety organization**, which involved hiring, onboarding and training firefighters, experts in vegetation management, and meteorologists, analysts, project managers and supervisors.
- **Rolled out upward feedback across PG&E**, enabling employees to provide constructive feedback both to their direct supervisor and to leaders in their reporting structure. This tool is part of PG&E's speak-up culture and encourages our leaders to grow and develop through direct insights.
- **Conducted quarterly performance conversations between employees and supervisors** to increase the frequency and effectiveness of feedback and coaching. These discussions also support and reinforce PG&E's speak-up and safety culture.
- **Demonstrated our commitment to supporting our communities** by contributing nearly 71,000 employee volunteer hours to schools and nonprofit service organizations throughout California, which is comparable to 2018. When multiplied by the California industry-standard value of \$29.09 for a volunteer hour, this represents more than \$2.07 million in equivalent labor.
- **Maintained an employee app called PG&E Spotlight**, a communications channel that allows all employees to access PG&E news and information when and where it's convenient for them, via their personal or PG&E-issued mobile device.



PG&E's Campaign for the Community is an annual employee and retiree giving campaign to raise money for qualifying 501(c)(3) nonprofit organizations and schools. Employees and retirees can donate to an eligible organization of their choice and receive matching contributions of up to \$1,000 each year. In 2019, PG&E employees donated over \$7 million to nearly 6,100 organizations. The PG&E Corporation Foundation matched an additional \$4.2 million. In addition, employee-organized fundraisers contributed more than \$210,000 from donations and matches to 112 benefitting nonprofit organizations and schools, primarily in communities where PG&E employees live and work.

Measuring Progress

PG&E conducts a quarterly survey of employee engagement, sampling a portion of the employee population each time. The 2019 fourth quarter score was 64 percent, indicating the proportion of respondents who gave favorable answers to questions measuring engagement, with 33 percent of employees participating in the survey and a margin of error of plus or minus 2 points. This score fell short of our target of 68, reflecting the broad challenges PG&E faces as an enterprise. Our next survey will be conducted in 2020.

2019 Employee Survey Results

Quarter	Score ¹
Q1	54%
Q2	61%
Q3	64%
Q4	64%

1. Refers to the percentage of favorable responses to questions that measure employee engagement.

Employee Volunteer Hours

Year	Target	Actual
2011	28,875	32,585
2012	34,215	41,792
2013	43,050	47,855
2014	50,000	75,000
2015	79,000	87,000
2016	90,000	96,800
2017	91,000	95,009
2018	91,000	78,844
2019	N/A ¹	71,000

1. Employee volunteerism is currently not being reported against an annual target; however, hours are tracked for awareness and reported in our annual reporting of employee engagement.



Photo of Employee Champion Award winners with PG&E Corporation's former CEO and President and Pacific Gas and Electric Company's Vice President of Shared Services

Recognizing Employee Champions

In 2019, PG&E recognized several employees with our highest honors for their commitment to safety, innovation, environmental leadership, diversity, and community involvement. PG&E awarded three champions in each category \$1,500 each to present to the nonprofit of their choice.

Photo taken 2019



Career Pathways

The energy industry is changing at a rapid pace. To keep up with this transformation, PG&E is focused on developing a workforce with the skills and expertise to operate our business safely while also meeting the needs of our customers.

Our Approach

We take a multi-pronged approach to developing our talent within PG&E. Through our talent identification efforts, robust training offerings at PG&E Academy, and targeted efforts at building workforce pipelines such as Power Pathway, PG&E remains poised to have the talent needed to meet the needs of our business.

We provide employees a range of technical training on the knowledge and skills required to perform their jobs safely using approved tools and work procedures. These courses help prepare our workforce as we integrate new technologies, systems and processes into our operations. Consistent with PG&E's commitment to ensuring all employees are qualified to perform their assigned tasks over the duration of their careers, PG&E offers a range of skill refresher and employee development courses.

In addition, PG&E's long-term strategic planning includes employee and leadership development, as well as succession planning, with a commitment to fill 75 percent of management vacancies in the positions of director-level and higher with internal candidates.



Careers through Power Pathway

PG&E's Power Pathway™ program continues to play a central role in our workforce development strategy. Students enrolled in the program receive industry-specific training that addresses the academic, vocational and physical abilities students will need to enter the energy industry workforce.

Created in 2008, Power Pathway targets those who are out of work or under-employed and has a strong focus on enhancing opportunities for women and those who have served in the military. PG&E has been a strong supporter of training and hiring veterans and military members dating back to World War I and recognizes the invaluable skills and perspectives they can offer companies looking for mature, highly qualified employees.

Photo taken 2017

2019 Milestones

In 2019, notable accomplishments included:

- **Power Pathway enters its second decade of service:** We continued to partner with local workforce development organizations to hold Power Pathway programs for our gas and electric lines of business. The programs represent our commitment to working within our communities and developing diverse and underemployed talent to meet the needs of our future workforce. During the year, programs took place in Sacramento, San Jose, and Oakland. Our Power Pathway efforts support our desire to reflect the communities we serve.
- **Skill Development Partnership with Cal Poly:** As part of the decommissioning of our Diablo Canyon Power Plant, we have dedicated \$11 million to the reskilling of plant employees by the year 2025. This marks a one-of-a-kind collaboration between PG&E and California Polytechnic State University.
- **Introduced a new Leadership Development Program:** PG&E Academy introduced a new leadership program, Leading the Energy Network of Tomorrow. This program develops PG&E's leaders to think innovatively, lead through change, build high performing teams, and make sound and strategic decisions while delivering measurable results. The program also prepares leaders to build the energy network of tomorrow while safely and reliably delivering affordable, clean energy to customers today. Upon completion of the program, participants will be better prepared to:
 - Support PG&E's sustainable energy future, given the ongoing changes in markets, regulations and policies.
 - Make data-driven decisions that align with PG&E's safety and affordability goals.
 - Innovate and refine solutions that are customer-focused and human-centric.
 - Influence change that yields lasting results.
 - Develop high performing teams who work through collaboration and partnership.

We also continued to make strides toward our leadership and employee development goals through our 31 apprenticeship programs. An example is the Apprentice Line Worker program: a comprehensive four-year initiative designed to develop the safest and most proficient line workers in the industry through a combination of field and classroom training.

Measuring Progress

We work to hire from within our own ranks whenever possible, with an overall goal to provide opportunities for our employees to develop their skills. In 2019, to fill positions, 51 percent of our employees were either promoted or moved into new roles, and 1,672 new employees joined PG&E.

As part of our continuing commitment to our employees, we delivered more than 670,000 hours of technical, leadership and employee training in 2019. This includes more than 9,000 hours of training delivered via our on-site Virtual Learning courses, which help us extend learning and training opportunities to our employees where they work.

To measure success, employees who participate complete surveys and provide feedback on how much the training has increased their knowledge. For courses that teach technical skills or reinforce skills that involve high-consequence tasks, every employee is required to pass an assessment that covers both knowledge and skills gained.

At PG&E Academy, our in-house organization charged with enhancing employees' skills and qualifications, we introduced a new five-point scale survey in 2014, asking employees to rate their ability to use training on the job. In 2019, training effectiveness was 4.57, meeting our goal.

Training Effectiveness

	2016	2017	2018	2019
Goal	4.45	4.52	4.52	4.28
Result	4.48	4.52	4.63	4.57

Year over year, we also strive to increase the number of Power Pathway programs offered in our service area. Power Pathway's utility industry hire rate is 82 percent, with 50 percent being veterans, and 67 percent being minority or women graduates. Of those hired into PG&E since inception, 69 percent are minority, 46 percent are veterans, and 10 percent are women graduates.



Diversity and Inclusion

At PG&E, we are committed to making diversity and inclusion integral to all that we do. We work to ensure that our employees always feel safe on the job, that their voices and ideas are heard and that everyone experiences a sense of belonging at PG&E. We also remain focused on representing the broad diversity of the communities we serve.



"When we value the unique experiences of our employees and encourage them to bring their whole selves to work, we simply get better outcomes for our customers."

THIS IS PG&E

Mary King
Vice President of Human Resources
and Chief Diversity Officer



Our Approach

PG&E's efforts to foster a diverse and inclusive culture and workforce are led by our Chief Diversity Officer, with support from the senior leadership team.

The Compliance and Public Policy Committee of PG&E Corporation's Board of Directors reviews our diversity and inclusion practices and performance. This oversight helps ensure that diversity and inclusion principles are embedded throughout the lifecycle of our talent management programs.

Key elements of our approach include engaging employees from day one, targeted employee development to level the playing field for diverse talent, an ongoing commitment to diversity among our leadership team, and furthering cultural understanding and role-modeling inclusion. In addition, our Employee Resource Groups continue to be at the forefront of PG&E's diversity and inclusion efforts, as they have been for close to 50 years.

Engaging with employees on race and diversity

Social justice and racial inequity have rightly gained considerable attention. PG&E is committed to supporting our employees and our customers to address these challenging issues. PG&E issued a public statement recognizing these concerns and affirming our values of diversity and inclusion as a corporate champion for equity. In support of ongoing education, we provided our leaders with a tool to support listening sessions with their teams, in addition to enhancing the information and resources available on our employee intranet site.

More broadly, PG&E has long supported Employee Resource Groups and Engineering Network Groups. These affinity groups raise money through various fundraising initiatives to provide college scholarships, actively support our recruiting efforts and contribute their time and energy by sponsoring programs in support of all employees. Our charitable giving process has also expanded, making it easier than ever for our employees to engage in personal charitable giving.

Employee Experience

From day one at PG&E, we ground all employees in our commitment to and definitions of diversity and inclusion at new employee orientation:

- **Diversity** is characterized by all the ways in which we are different. It is present in our job functions, work styles, experiences and ideas. Diversity cultivates new perspectives and innovation, which enable us to better serve our customers, fellow employees and shareholders.
- **Inclusion** is the process of leveraging the power of our employees' individual uniqueness to achieve our business strategies and goals, be better corporate citizens and be the best in the industry.



Photo taken 2019

IT STARTS WITH WHY

TELLING YOUR STORY

Diversity includes everyone and everyone can speak up by telling their story

Hello my name is
WHY
 Hello! I'm Michael, Diversity and Inclusion Program Manager for PG&E. Growing up I remember my aunt not being allowed to bring her boyfriend to family events. David had a different skin color than we did. I also grew up in a place and time where I couldn't come out as gay until I was almost finished with college.
 I have seen what racism and homophobia do to hurt and demoralize people. I knew I wanted to be part of a solution and that led me to a career in diversity and inclusion. I am here to help all of you to speak up and share your stories too. everyone is included in the definition of diversity!
 Diversity includes everyone and everyone can speak up by telling their story

It Starts with Why

PG&E continues to implement an enterprise-wide diversity awareness campaign, which encourages all employees to share their personal stories of why they're passionate about diversity and inclusion. Over the campaign's two years, more than 300 employees, many of whom are members of our Employee Networks, have participated in the campaign.

Employee Resource Groups and Engineering Networks

PG&E's Employee Networks date back almost five decades. Today, our Employee Resource Groups (ERGs) and Engineering Network Groups (ENGs) promote our business objectives and support a culture of diversity and inclusion by:

- Fostering employee belonging
- Supporting an environment of inclusion that values and respects diversity in our workforce
- Promoting positive relationships with the communities and customers we serve

The networks help create an environment where every employee can feel welcome and contribute to our overall business success. They assist in welcoming and mentoring new employees; provide professional and career workshops; host social networking events; and offer community support, scholarships and an environment for collaboration.

ERG members come from every level and job function and participate across 27 chapters throughout our service area. Almost one-third of all ERG members are also members of more than one ERG. More than half of PG&E's officers are executive sponsors who serve as an advisor, mentor and advocate to one or more ERG.

Each year, our ERGs support community organizations through charitable contributions and volunteerism. Often, these grassroots organizations help to educate our workforce and, in turn, inform our diversity and inclusion efforts.

Role-Modeling Inclusion

PG&E regularly recognizes employees who embody our diversity and inclusion principles, culminating each year with the Diversity and Inclusion Awards, which honor employees for demonstrating inclusive leadership.



Photo of Diversity and Inclusion Award winners with PG&E Corporation's former CEO and President and Senior Vice President of Human Resources (Photo taken 2019)

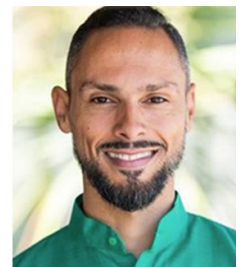
Equal Employment Opportunity and Affirmative Action

PG&E is committed to maintaining a work environment that is free from any and all forms of unlawful discrimination, harassment and retaliation. In accordance with federal and state laws, including the California Fair Employment and Housing Act, it is PG&E's policy to prohibit discrimination, harassment and retaliation against any applicant, employee, unpaid intern, volunteer, vendor, contractor, customer, or client on the basis of race, color, national origin, ancestry, sex (which includes but is not limited to pregnancy, childbirth, breastfeeding and medical conditions related to pregnancy, childbirth or breastfeeding), sexual orientation, gender, gender identity, gender expression, transgender status, age, religion, religious creed, physical or mental disability, protected veteran status, medical condition, marital status, genetic information, military and veteran status, citizenship status, utilization of leaves of absence protected under state or federal law, any other reason prohibited by law, or any other factor that is not job-related.

2019 Milestones

In 2019, our Employee Networks continued to make progress implementing our diversity and inclusion strategy:

- **Leveraged ENGs for recruiting and retention.** Our ENGs continued to grow, with approximately 1,200 members participating throughout our service area. During the year, the ENGs supported PG&E's efforts to recruit and retain STEM talent at national conferences.
- **Spurred access to higher education.** Our ERGs awarded a record \$340,000 in scholarships to 142 students, ranging from \$1,000 to \$10,000 per scholarship. Since 1989, more than \$5 million in scholarships have been awarded to thousands of recipients.



- **Furthered cultural understanding.** Our ERGs and ENGs developed and launched a cultural understanding learning series designed to facilitate meaningful conversations among employees and leaders. Insights from the inaugural session, “Meet your Muslim Neighbor,” included demystifying stereotypes about the Muslim community and provided calls to action around inclusion. The series was delivered bi-monthly for all employees.
- **Enhanced focus on mental health.** Our Access ERG, which supports the inclusion of individuals with disabilities, created a new membership committee, “Minds of All Kinds,” to support awareness and wellness among members and employees and to combat stigmas associated with mental health.

PG&E has also enhanced our engagement with employees on mental health issues during the COVID-19 pandemic, including providing resources, information, webinars and podcasts. This includes topics such as coping with stress during the pandemic and staying connected while social distancing.

We also targeted employee development to level the playing field for diverse talent:

- **Expanded leadership opportunities for women.** Our Women’s Network, with support from officer sponsors and our office of diversity and inclusion, embarked on a research project to develop a roadmap to increase the number of women in operational roles. Their recommendations and findings from internal interviews, rigorous data analysis and external benchmarking will continue to inform workforce strategies in electric and gas operations and our power generation organization. The Women’s Network has also led a #MentorHer campaign to build support and awareness for the need to mentor and support women.
- **Enhanced “Latinx” engagement.** With the help of our Latino ERG and Society of Hispanic Engineering Networks, we hosted a seminar with leading experts to understand the growing Latinx demographic. We also arranged for two ERG leaders to attend Stanford’s Latino Leadership Program to bolster their professional development.
- **Investing in career development.** We continued our investment in the national Management Leadership for Tomorrow Career Advancement program, designed to prepare mid-level African American, Hispanic and Native Americans to advance into senior leadership roles. Since 2016, five PG&E leaders have attended the program, four of which have since been promoted or are working as interim directors.

2019 Recognition

Human Rights Campaign: Named PG&E Corporation one of the best places to work for the 17th consecutive year, providing a perfect 100 percent rating on their annual Corporate Equality Index for our consistently strong commitment to diversity and inclusion. The Human Rights Campaign is the largest national civil rights organization working to achieve workplace equality for lesbian, gay, bisexual and transgender Americans.



Disability Equality Index: Gave Pacific Gas and Electric Company a score of 100 percent on the 2019 Disability Equality Index for the fifth straight year and named us one of the “2019 Best Places to Work for Disability Inclusion.” The index is compiled by Disability:IN and the American Association of People with Disabilities.



Black Enterprise magazine: Named Pacific Gas and Electric Company as one of the 2019 50 Best Companies for Diversity



Latina Style magazine: Named Pacific Gas and Electric Company one of the 2019 50 Best Companies for Diversity.



Measuring Progress

PG&E continues to employ a higher percentage of women and minorities in our workforce than the national average for gas and electric companies.

Benchmarking Workforce Demographics

Category	PG&E	U.S. Energy Company Average ¹
Women	26.8%	25.5%
Ethnic Minorities	44.8%	24.9%

1. Source: 2019 EEO-1 Reports: Combined Electric and Gas Utilities, U.S. Total. NAICS Code 2211—Electric Power Generation, Transmission & Distribution, U.S. NAICS Code 2212 – Natural Gas Distribution, U.S. 2015 data is the most recent available.

We also continue to pursue diversity among leadership positions—managers and above—through a combination of external hiring, internal promotions and lateral moves. In 2019, we focused on interventions in the recruiting process to raise awareness of manager-and-above job openings, increase our focus on diverse candidates and improve our interview and selection process. We report progress monthly and discuss organizational efforts in business process review sessions.

PG&E's workforce statistics by race, ethnicity and gender for 2017 to 2019 are below.

PG&E Workforce Demographics, 2017 – 2019

EEOC Category	2017	2018	2019
Women	27.6%	27.5%	26.8%
Officials and Managers	33.1%	33.9%	34.9%
Professionals	34.8%	34.6%	33.8%
Technicians	19.1%	18.7%	17.7%
Administrative Support Workers	70.7%	71.0%	71.8%
Craft Workers	2.5%	2.7%	2.9%
Operatives	3.4%	3.7%	2.9%
Laborers and Helpers	10.8%	11.5%	12.7%
Service Workers	8.4%	8.1%	7.7%
Ethnic Minorities	43.3%	43.9%	44.8%
Officials and Managers	33.2%	35.3%	36.0%
Professionals	44.8%	45.4%	46.2%
Technicians	43.9%	44.1%	44.5%
Administrative Support Workers	63.4%	64.0%	65.2%
Craft Workers	33.9%	34.3%	35.7%
Operatives	39.2%	41.8%	43.5%
Laborers and Helpers	53.0%	53.4%	55.4%
Service Workers	34.6%	35.9%	34.6%
Minority Groups			
American Indian or Alaskan Native	1.2%	1.2%	1.2%
Asian	14.3%	14.4%	14.1%
Black/African American	6.4%	6.5%	6.5%
Hispanic/Latino	18.1%	18.4%	19.0%
Native Hawaiian or Pacific Islander	0.6%	0.6%	0.6%
Two or more races	2.8%	2.9%	3.3%



Health and Wellness

Our employees' health and safety is an inseparable part of providing our customers with safe, reliable, affordable and clean energy. We provide integrated solutions and programs that cover all aspects of employee health and wellness so our workforce can keep going strong and live healthier lives—physically, emotionally and financially.

Our Approach

Through regular reviews of programs offered in the market and best practices from other companies, PG&E continues to focus on a prevention-first approach that seeks to improve employee health by identifying and treating issues before they start. We believe in a comprehensive approach to wellness, which encompasses physical, emotional and financial health—and we are prioritizing preventive efforts in all three areas.

This includes:

- PG&E's medical plan, and health and wellness programs, which provide comprehensive care and service options designed to promote the overall health of our workforce, including preventive services.
- The Employee Assistance Program (EAP), which offers employees options to help them manage life's demands at work and at home, from confidential counseling to referrals for local legal, financial and other services.
- Our Peer Volunteer Program, which promotes a culture of openness, acceptance and recovery, with PG&E employees who are in long-term recovery from substance use disorders—or who have lived with a loved one with an alcohol or substance use issue—assisting others who need help.
- A wide range of services to help employees manage their finances and plan for the future, including free access to a financial advisor, life and accident insurance, 401(k) and retiree benefit plans.

2019 Milestones

Highlights included the following:

- **Continued our on-site health clinic presence.** Employees increased their use of the PG&E Health Center at our corporate headquarters, which offers comprehensive primary care health services and occupational health services. We also operate two smaller clinics in the field specifically for work-related injury care. In addition, we have an on-site occupational health clinic at our Diablo Canyon Power Plant.
- **Conducted an opioid awareness communications campaign** to raise employee consciousness around the epidemic and provide actionable steps employees can take, including safe disposal of excess and/or expired prescriptions.
- **Supported employees through the wildfire season** with over 600 EAP management consultations, 230 training sessions, and a nearly 15 percent utilization rate, more than three times higher than the national average.
- **Continued consistent participation in our Industrial Athlete program**, with increased partnership and participation with grassroots safety leads in all lines of business.
- **Maintained employee annual Health Screening participation rates** at over 80 percent, which allows employees to learn of any chronic health risks and to take action on any identified issues.
- **Launched a new online Health and Wellness portal and app** to support employee wellbeing. With daily reminders and tips aimed at improving healthy habits, employees have access to free digital and telephonic health management tools and resources, including a telephonic tobacco cessation program, health risk assessment, nutrition guide, sleep guide, wellbeing training and general health coaching.
- **Provided onsite health coaching at select office locations**, making services more accessible and convenient to employees. Health coaches work with employees on topics such as lifestyle/stress management, nutrition and tobacco cessation.
- **Continued to grow and support our Wellness Ambassador Network.** More than 340 employees have volunteered to serve as local resources who foster a culture of health at their workplace, and drive awareness and participation in PG&E's health and wellness programs.

Measuring Progress

The percentage of employees unavailable due to health for the last three years is as follows:

Workforce Unavailable Due to Health¹

	2017	2018	2019
Workforce Unavailable Due to Health	8.1%	7.9%	7.8%

1. Percentage of full-time employees unavailable for work due to long term or short-term health reasons, as measured by total workdays lost for the entire year.



Environment

Key Sustainability Indicators

30%

Percentage of power from eligible renewable resources

110,000

Metric tons of carbon dioxide avoided in our operations

PG&E’s environmental commitment begins with our aim to fully meet all environmental requirements, but it extends much further. We continue to support and help advance the state’s climate and clean energy goals. We also remain committed to supporting climate resilience efforts at the state and local levels to better prepare for, withstand and recover from extreme events and other risks related to climate change.

Highlights

Continued our operational partnership agreements with the U.S. Forest Service and Bureau of Land Management to expedite and streamline critical wildfire safety and infrastructure work while protecting species and public lands.

Continued to make significant progress in securing Habitat Conservation Plans, which enable PG&E to most efficiently conduct operations and maintenance activities while protecting listed endangered species.

Remained on track to meet the Million Ton Challenge, a voluntary Pacific Gas and Electric Company goal to avoid one million tons of greenhouse gas (GHG) emissions from our operations over five years.

Permanently protected 7,241 acres of land as part of the Land Conservation Commitment, which ultimately will protect 140,000 acres of PG&E-owned watershed lands.

Helped our customers save about 166 million gallons of water through energy-efficiency measures that deliver water savings.

Further integrated climate change adaptation planning into our risk management processes.

Awarded the third series of grants for the Better Together Resilient Communities grant program, a shareholder-funded initiative to support local climate resilience planning efforts.

Offered technical assistance workshops for suppliers focused on sustainability, including best practices for measuring greenhouse gas emissions.

Implemented sustainable practices at our facilities, reducing aggregated energy use intensity by 8 percent.



Compliance

Our environmental policy requires strict adherence to all applicable environmental laws and regulations, reflecting the foundation of PG&E's environmental commitment.

Our Approach

Environmental Management System

PG&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 GHGs such as carbon dioxide, methane and sulfur hexafluoride.

To meet these requirements, PG&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. The EMS uses a series of compliance work processes that help PG&E to manage regulatory compliance and our environmental impacts by each line of business.

The Vice President, Shared Services of Pacific Gas and Electric Company oversees our commitment to meeting environmental requirements. Compliance performance updates are reviewed monthly by PG&E's officers, and an annual environmental compliance summary is presented to the Compliance and Public Policy Committee of the PG&E Corporation Board of Directors.

Compliance Program Milestones

Planning

In 2019, PG&E continued to leverage its EMS to manage and improve environmental compliance and performance. Some of our major strategic initiatives include improving governance at our facilities, performing an annual aspects and impacts analysis to identify top environmental risks across operations, and evaluating opportunities to improve our environmental review process for utility projects.

Implementation and Operation

PG&E employs a variety of operational controls to help ensure that the actions we take in meeting our environmental compliance obligations are correct and repeatable. We also learn from our experiences and integrate any lessons into our work processes and staff development.

In 2019, we continued to expand on new opportunities to apply technologies and processes to further our compliance efforts and minimize impacts on the environment. Key EMS initiatives included:

- Enhancing our cloud-based solution to track and trend data from environmental incidents and compliance activities.
- Using the same cloud-based tool to manage and streamline our project environmental release to construction process and ensure oversight over project reviews.
- Deploying our cloud-based system to serve as a “one stop” resource for field employees to find key technical documents, procedures and guidance.
- Continuing to reach strategic, programmatic agreements with agencies that further streamline our processes while protecting the environment.

PG&E conducts training to ensure employees have the skills and knowledge to correctly perform environmental activities associated with their work. Each year, PG&E trains thousands of employees on various environmental compliance responsibilities. Additionally, we require employees to take a training course on our environmental policy to reinforce every employee’s role in supporting PG&E’s goal of environmental leadership.

Reviews and Corrective Actions

An environmental auditing program is critical to ensure compliance with the many environmental laws and regulations relating to our business.

We review and audit environmental performance in three ways: self-assessments, internal audits, and compliance testing and risk reviews.

- **Self-Assessments:** Environmental personnel perform self-assessments of facilities or projects they oversee. Each assessment evaluates a facility or project for compliance with environmental regulations.
- **Internal Audits:** The Internal Auditing department—which reports directly to the PG&E Corporation and Pacific Gas and Electric Company Vice President, Internal Audit and Chief Risk Officer—conducts systemic and programmatic controls-based audits to independently analyze the effectiveness of our environmental compliance management systems.
- **Compliance Testing and Risk Reviews:** These reviews, designed to assess the adequacy of controls and risk mitigation, as well as compliance work processes, are conducted by the Pacific Gas and Electric Company Risk and Compliance Department.

During 2019, we performed 4,294 self-assessments and three internal audits for environmental matters. We began evaluating and testing controls in 2019 and completed eight assessments. In 2020, we are correcting deficiencies identified in 2019 and continuing to evaluate our processes.

In addition, we review environmental-related risks periodically (annually for low risks and semi-annually for medium or high risks). We review mitigation processes for all risks on a monthly basis.

In pursuit of continuous improvement, we also employ a corrective action process, which includes performing root cause analyses of noncompliance issues identified through environmental agency inspections and tracking detailed corrective action plans to resolution.

Measuring Progress

Operational Performance

PG&E tracks and reports a wide range of annual environmental compliance performance indicators. This section covers our performance results for 2019.

Reported Unintentional Releases and Permit Exceedances

We report unintentional releases that exceed regulatory thresholds, as well as many smaller releases, in an effort to ensure operational transparency to local agencies. We reported a total of 37 releases, defined as an unintentional discharge of a regulated substance that required notification to the State of California or exceeded thresholds allowed in applicable permits.

Agency Inspections

In 2019, a total of 570 agency inspections were conducted at our facilities. The majority of these inspections were performed by Certified Unified Program Agencies, such as city and county environmental health departments and fire departments.

Environmental Sanctions and Penalties

To measure compliance results, we categorize all written enforcement actions issued by a regulatory agency as minor, significant or critical. In doing so, we consider the level of impact to the environment, potential or actual monetary damages including restoration costs, and the number of repeat incidences. (This characterization represents a change from prior years in an effort to better align with industry benchmarks.) All enforcement actions are reviewed by the environmental leadership team on a monthly basis. We also track the percentage of agency inspections that do not result in written enforcement actions.

We received nine enforcement actions in 2019 that were considered critical. Our rate of inspections without a written enforcement action was 91 percent, one point above our target of 90 percent.

In 2019, PG&E paid a total of \$47,003 in environmental penalties.

Compliance Data

	2017	2018	2016
Critical Enforcement Actions¹	—	—	9
Percentage of Inspections Without a Written Enforcement Action	93%	93%	91%
Releases/Exceedances	164	166	37
Penalties Paid	\$28,350	\$93,000	\$47,033
Agency Inspections	539	552	570
Audits Performed²	53	8	11
Self-Assessments Performed	2,609	3,101	4,294

1. In 2019, PG&E began categorizing all written enforcement actions issued by a regulatory agency as minor, significant or critical. In doing so, we consider the level of impact to the environment, potential or actual monetary damages including restoration costs, and the number of repeat incidences. This categorization better aligns with industry benchmarks.

2. Includes system audits, internal audits, and compliance and risk management reviews performed by PG&E.



Climate Change

Working to meet the challenge of climate change is central to PG&E’s long-term vision. Our commitment includes aligning our resources and business strategy with the state’s clean energy goals, and advocacy for policies and programs that enable safe, reliable, affordable and clean energy for our customers. We do so while also working to reduce the ever-growing threat of extreme weather and wildfires.

We are delivering clean and renewable energy to customers, strengthening our infrastructure in response to changing climate conditions and reducing our operational carbon footprint. We are also committed to supporting efforts at the local level to make the communities we serve more resilient to climate threats.

Wildfire Mitigation Progress

Our Community Wildfire Safety Program includes immediate and comprehensive actions to upgrade our infrastructure, monitor fire threats in real time and institute new wildfire safety measures.

■ = Target met or exceeded ■ = Target not met

Metric	2019 Target	2019 Result	2020 Target
Wildfire Safety			
System Hardening (line miles): Stronger poles, covered lines and/or targeted undergrounding	150	171	241
Enhanced Vegetation Management (line miles): Inspecting, pruning and removing vegetation	2,450	2,498	1,800
Visual and Aerial Inspections on: ≈50,000 transmission, ≈700,000 distribution and ≈200 substation assets in High Fire Threat Districts (HFTD)	100%	100%	See note 1
High-Definition Cameras (cameras): Improving real-time monitoring of high-risk areas and conditions	96	133	200
Weather Stations (stations): Enhancing weather forecasting and modeling	400	426	400
Sectionalizing Devices (devices): Separating the grid into small sections for operational flexibility	N/A	287	592
Transmission Line Switches (devices): Enabling targeted transmission outages to lessen downstream customer impacts	N/A	N/A	23

1. Target is annual inspections for Tier 3 HFTD facilities and three-year cycles for Tier 2 HFTD facilities.

Our Approach

PG&E is committed to California's vision of a sustainable energy future. Led by significant greenhouse gas emissions reductions in the electric sector this decade, California is on track to achieve the 2020 target established by California's Global Warming Solutions Act, or Assembly Bill (AB) 32, of reducing economy-wide greenhouse gas emissions to the 1990 level of 431 million metric tons of carbon dioxide-equivalent (CO₂-e) by 2020.

PG&E also remains actively engaged with policymakers and various stakeholders on the implementation of Senate Bill (SB) 32, which requires that the California Air Resources Board (CARB) ensure a 40 percent reduction in economy-wide greenhouse gases by 2030 compared to 1990 levels.

PG&E supported AB 398, which extends California's cap-and-trade program for reducing greenhouse gas emissions and provides cost protections for energy consumers. PG&E has advocated at CARB in support of a well-designed cap-and-trade program in CARB's many rulemakings over the past decade, including most recently the implementation of AB 398. The cap-and-trade 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 California.

In addition, PG&E has been actively working with the California Public Utilities Commission (CPUC) to implement SB 350's Integrated Resource Plan (IRP) requirements to meet the electric sector's contribution to the state's greenhouse gas reduction targets and do so in a way that minimizes impacts on all customers' energy bills.

Looking ahead, PG&E is committed to California's implementation of SB 100 and carbon neutrality by 2045 in a reliable and cost-effective manner for customers. SB 100, which includes increased RPS objectives and clean energy goals, is still being implemented by the CPUC, CEC and CARB. Additionally, Executive Order B-55-18 sets a statewide goal to achieve carbon neutrality by 2045. We anticipate that we will be an active participant in future efforts in the Legislature to codify the carbon neutrality goal and in proceedings at the CPUC, CEC, and CARB to determine how to achieve carbon neutrality.

Reporting Our Impacts

We believe it is essential that investors, customers, policymakers and other stakeholders have access to information that allows them to assess and understand the risks and opportunities associated with climate change.

PG&E reports its greenhouse gas emissions to the California Air Resources Board and the U.S. Environmental Protection Agency (EPA) on a mandatory basis. On a voluntary basis, PG&E reports a more comprehensive emissions inventory to The Climate Registry, a nonprofit organization. Each year, PG&E also reports its greenhouse gas emissions and climate change strategies to the CDP, an international not-for-profit organization that requests information on behalf of institutional investors.

Engaging Our Customers and Communities

PG&E actively works with customers to help them achieve energy savings and greenhouse gas emission reductions through a broad range of programs and incentives for energy efficiency, demand response and distributed generation and storage. These efforts include helping local governments develop strategies and implementation plans to save energy and reduce emissions, and connecting them with PG&E programs and other resources to help them meet their energy goals.

Addressing Our Own Carbon Footprint

As part of PG&E's broader commitment to address climate change, we launched the Million Ton Challenge, a voluntary five-year carbon reduction goal for Pacific Gas and Electric Company's operations. The goal is to avoid one million tons of cumulative greenhouse gas emissions from our operations from 2018 through 2022, compared to a 2016 baseline.

To meet the goal, we are working to reduce emissions across several business areas:

- Saving energy through energy-efficient and more sustainable facilities,
- Reducing methane emissions from natural gas operations,
- Continuing to deploy a smarter, cleaner fleet of PG&E vehicles, and
- Adopting environmentally responsible products and services, with a focus on electric substation equipment.

Clean Energy Policy

PG&E supports the decarbonization of California's economy through timely, durable, effective and affordable policy and energy solutions. We remain committed to climate actions to reduce greenhouse gases and address the impacts of global warming—from deploying clean energy technologies to continuing to lead and innovate on energy efficiency.

As required by SB 32, CARB adopted its 2030 Scoping Plan Update in 2018, which established the state's plan for achieving the 2030 GHG target. We remain engaged in state regulatory and legislative climate change activities to meet the state's greenhouse gas emissions reduction goals at the lowest possible cost to customers.

We also remain focused on other Scoping Plan measures such as Low Carbon Fuel Standard implementation and the reduction of Short-Lived Climate Pollutants per SB 1383, which includes specific 2030 emission reduction goals for methane, fluorinated gases and anthropogenic black carbon.

PG&E also supports California's stringent greenhouse tailpipe emissions standards, as well as advancing EV adoption by providing tax incentives and support for charging infrastructure. In 2019, as part of our membership in the National Coalition for Advanced Transportation, PG&E joined California and several other states in a lawsuit against revising the EPA's existing greenhouse gas emission standards.

PG&E's Climate Policy Principles

Meeting the challenge of climate change is central to PG&E's vision of a sustainable energy future. Consistent with our vision, PG&E works to reduce greenhouse gas (GHG) emissions and environmental impacts from our operations, and acts as a valuable partner to do so in California and beyond. PG&E also builds climate resilience through taking actions to adapt to and prepare for a changing climate and associated weather patterns that could affect our assets, infrastructure, operations, employees and customers.

PG&E is committed to achieving more sustainable operations by:

- Reducing emissions of methane, a potent greenhouse gas released from the operation of natural gas infrastructure, by implementing Senate Bills 1371 and 1383, which address leak abatement and short-lived climate pollutants, respectively.
- Making our facilities more energy efficient and sustainable; increasing clean vehicles and fuels in our fleet; and adopting environmentally responsible products and services.
- Engaging with our customers to help them use less energy and better manage their energy footprint through solutions that include energy efficiency and demand response; clean and renewable energy; storage; and low-carbon transportation fuels and fueling infrastructure.
- Integrating the best climate science into PG&E decision-making and asset planning to mitigate climate risks and build resilience to climate-driven impacts over the long term.

PG&E advocates for policies that:

- Position California and the nation to achieve economy-wide emissions reductions consistent with limiting the increase in global average temperature to less than 2° Celsius above pre-industrial levels.
- Support cost-effective achievement of GHG goals through providing flexibility in GHG emission-reduction strategies, covering all major emitting sectors, and fostering innovation and technology.
- Support well-designed carbon pricing mechanisms, including California's cap-and-trade program, that enable harmonization across jurisdictions over time through strategies such as linkage.
- Promote GHG reductions beyond California's borders, with California positioned as a key policy innovator, technology exporter and "proving ground" that supports broader decarbonization.
- Promote the use of offset credits and carbon sinks as valuable tools in reducing GHG emissions, improving local air quality, and enhancing the resilience and adaptability of natural ecosystems and communities.
- Help our customers become more climate-resilient and reduce their own GHG footprint affordably.
- Support PG&E's ability to invest in and adaptively manage a modern and resilient natural gas and electric system that can better withstand climate-related impacts and enable PG&E to continue providing safe, reliable, affordable and clean energy in the face of a changing climate.

Adapting to the Impacts of Climate Change

As California continues to experience the impacts of climate change, PG&E is taking action to build a more climate resilient energy network. PG&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.

Adapting to these changing risks involves understanding the impacts of climate change on our business, employees, customers and the communities we serve. It also means being prepared to withstand and rapidly recover from major disruptions in service caused by climate-driven weather events. PG&E's commitment is to continue to provide safe, reliable, affordable and clean energy service even as the climate conditions under which we operate become more challenging.

For PG&E, climate adaptation is defined as the actions to be taken related to PG&E's assets, infrastructure, operations, employees and customers to mitigate against potential consequences and absorb and recover from the impacts of the changing climate and associated weather patterns.

PG&E's multipronged approach includes:

- **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.
 - We are integrating climate data into PG&E's strategic risk planning process. Pacific Gas and Electric Company will file its second Risk Assessment Mitigation Phase report with the CPUC in 2020. We filed our first assessment in 2017.
 - We have begun to assess the maturity of key capabilities among the lines of business that are critical to effectively plan for climate change. PG&E set its first internal baseline in 2018.
 - We are also conducting research into specific climate impacts and how they relate to PG&E's infrastructure. This research is designed to empower decision-makers with robust analysis around climate threats to our system.
 - We coordinate internally to bridge the gap between near-term emergency preparedness efforts and longer-term climatic trends that may contribute to extreme weather events.

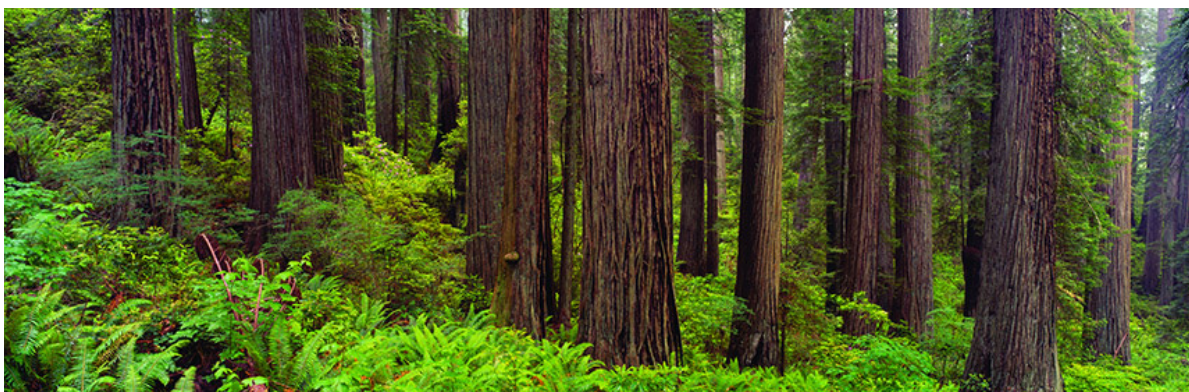


Regulatory Engagement on Climate Adaptation

PG&E has been an active participant in the CPUC's first proceeding focused specifically on climate adaptation and resilience. The outcome of this proceeding will be guidance on critical topics that will assist utilities in the mission to provide safe, reliable, affordable, and clean energy despite more frequent and severe climate impacts.

Topics under consideration include:

- What data sources, scenarios, and tools utilities should rely on when planning for climate resilience
- How forward-looking climate data should be incorporated into utility and CPUC processes for investment planning and determining risk
- Whether certain customers are particularly vulnerable to climate impacts, and how utilities should take this into account
- How utilities and the CPUC can make adaptation investments effectively in the face of uncertainty



Resilience Grants for Communities

Through the Better Together Resilient Communities grant program, PG&E and The PG&E Corporation Foundation are supporting local climate resilience initiatives. In 2019, we awarded four grants focused on helping communities address wildfire risk:

- The Hopland Band of Pomo Indians Inter-Tribal Wildfire Resiliency Project will use its grant to build capacity among tribes with respect to fire resiliency.
- The Ag Innovations Fire Smarts Project aims to launch a Fire Safe Council in Calistoga.
- The New Paradigm College Ecological Restoration and Workforce Development Project aims to develop a tribal workforce development curriculum to engage in ecological restoration.
- The Pepperwood Preserve Forest Management Data Toolkit Project aims to launch a data toolkit for forest management to increase the pace of fuel reduction planning and implementation.

- **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. Pacific Gas and Electric Company participates in the Governor's Office of Planning and Research's Integrated Climate Adaptation and Resilience Program, the U.S. Department of Energy's Partnership for Energy Sector Climate Resilience, and the Corporate Climate Resilience Council. We are also an active participant in CPUC efforts to establish guidance for the utilities regarding adapting to climate change.
- **Partner directly with customers and communities** to enhance climate resilience in California. PG&E offers grants to help communities through our Better Together Resilient Communities program.

PG&E's climate adaptation efforts are overseen by our Climate Resilience Officer Committee, which includes leaders from key departments across the business. This group of senior leaders is also responsible for their respective line-of-business Climate Action Plans.

With regard to increased electricity demand from more extreme, persistent and frequent hot weather, PG&E believes its strategies to reduce greenhouse gas emissions—such as energy efficiency and demand response programs, infrastructure improvements and the support of renewable energy development and storage—will help address the state's evolving energy demands.

Air Quality and Environmental Justice

In July 2017, California took an important step to address air pollution in the most heavily 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.

PG&E strongly supports a comprehensive, statewide air protection program and was actively engaged in the development and passage of AB 617. PG&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.

2019 Milestones

In 2019, we continued to minimize our carbon footprint and prepare for the consequences of a changing climate:

- **Delivered clean energy to customers.** In 2019, nearly 30 percent of our delivered electricity came from state-eligible renewable energy sources, and we remain on track to meet the state's renewable energy requirements under SB 350 and SB 100.
- **Reduced emissions from our operations.** In the second year of the Million Ton Challenge, Pacific Gas and Electric Company avoided about 110,000 tons of CO₂. With a total of more than 550,000 tons avoided to date, we are well on our way toward our five-year goal. This included avoiding emissions through energy-efficient and more sustainable facilities, continuing to deploy clean fleet vehicles, and reducing methane emissions from natural gas operations.
- **Launched our second Climate Vulnerability Assessment.** PG&E is embarking on a service area-wide assessment of how climate-driven natural hazards will impact our assets. This climate vulnerability assessment, which will be conducted over several years, will rely on recent climate projections from California's Fourth Climate Change Assessment.

It will update our first climate vulnerability report, completed in 2016, to better understand and prepare for the impacts of climate change. By characterizing the risks of California's future climate, the updated assessment will help PG&E make climate-smart investments in the near term to continue providing safe, clean, affordable and reliable energy to customers in the future.



Reducing our SF₆ emissions

Sulphur hexafluoride—or SF₆—is commonly used by PG&E and other energy companies as an electrical insulating material in high-voltage circuit breakers and gas-insulated switchgear. But if it escapes to the atmosphere, it contributes to global warming. In fact, it's about 23,500 times more potent as a greenhouse gas than carbon dioxide, and, once emitted, can live in the atmosphere for 800 to 3,200 years.

PG&E has established a multi-pronged approach to tackle SF₆—helping PG&E stay ahead of regulatory obligations and contributing toward our Million Ton Challenge goal. The approach includes repairing the highest leaking circuit breakers, implementing SF₆ cylinder best management practices, phasing-in SF₆-free equipment, and engaging with the California Air Resources Board on regulatory amendments to phase-out SF₆.

Photo taken 2017

Measuring Progress

Mandatory Emissions Reporting

Under AB 32's annual reporting requirements, PG&E reports greenhouse gas emissions to CARB. These reports include emissions from our electric generation facilities, natural gas compressor stations, natural gas supplied to customers and the fugitive emissions from our natural gas distribution system and compressor stations.

The following table shows the greenhouse gas emissions data PG&E reported to CARB under AB 32.

PG&E Emissions Reported to the California Air Resources Board: CO₂-e Emissions from Owned Power Generation¹ and Operations

	2017	2018	2019
Total CO₂-e Emissions (metric tons)	2,292,218	2,512,130	2,484,127
Humboldt Bay Generating Station	199,338	179,025	189,163
Gateway Generating Station	1,111,268	1,163,952	1,137,160
Colusa Generating Station	981,613	1,169,153	1,157,804
CO₂ Emissions Rates (lbs/MWh)			
Humboldt Bay Generating Station	1,017	1,025	1,028
Gateway Generating Station	881	872	872
Colusa Generating Station	866	861	842
Fossil Plants ²	940	876	868
All Plants ²	146	171	163
Other CO₂-e Emissions (metric tons)			
Natural Gas Compressor Stations ³	269,133	299,256	344,810
Distribution Fugitive Natural Gas Emissions	630,249	497,299	496,789
Customer Natural Gas Use ⁴	38,202,174	41,664,525	42,058,499

1. PG&E's owned net generation was 33,849 GWh in 2019.

2. Applies to fossil-fuel combustion generating stations.

3. Includes all PG&E-owned generation sources, including nuclear, hydroelectric and renewable energy.

4. Includes, but is not limited to, compressor stations and storage facilities emitting more than 25,000 metric tons of CO₂-e annually.

PG&E also reports the greenhouse gas emissions from our facilities and operations to EPA under EPA's mandatory reporting requirements.

Voluntary Emissions Reporting

PG&E's voluntary greenhouse gas emissions reporting showed that PG&E's CO₂ emissions rate was our lowest level on record in 2018, the most recent year for which verified data are available. PG&E's emissions rate of 206 pounds of CO₂ per megawatt-hour of delivered electricity represented a slight reduction from the prior year's figure of 210. The emissions rate takes into account both PG&E-owned power generation and power purchased from third parties.

Benchmarking Greenhouse Gas Emissions for Delivered Electricity (Pounds of CO₂ per MWh)

U.S. Average¹	947
Pacific Gas and Electric Company²	
2018	206
2017	210
2016	294
2015	405
2014	435
2013	427
2012	445
2011	393
2010	445

1. U.S. Environmental Protection Agency eGRID 2018.

2. Because PG&E purchases a portion of its electricity from the wholesale market, we are not able to track some of our delivered electricity back to a specific generator. Therefore, there is some unavoidable uncertainty in PG&E's total emissions and emissions rate for delivered electricity.

In addition, PG&E saw a significant reduction in total CO₂ emissions from its electricity sales, falling 2.7 million metric tons in 2018.

From year to year, several factors affect PG&E's power mix and emissions, including the availability of clean hydro power and renewable energy in our energy mix, customer electricity demand, the share of customers in our service area receiving procurement service from PG&E, as well as the availability and flexibility of the power plants in our portfolio.

Total Greenhouse Gas Emissions by Source Category (Million Metric Tonnes CO₂-e)¹

	2016	2017	2018
Delivered Electricity ²	10.23	7.60	4.89
Electricity Transmission and Distribution Line Losses	0.68	0.34	0.14
Customer Natural Gas Use	37.59	36.29	40.93
Process and Fugitive Emissions from Natural Gas Systems	1.54	1.62	1.47
Gas Compressor Stations	0.26	0.23	0.25
Transportation	0.11	0.10	0.09
Facility Gas and Electricity Use	0.04	0.03	0.03
Sulfur Hexafluoride (SF ₆) from Electrical Equipment	0.05	0.05	0.06
Other Emissions	0.01	0.01	0.01
Total	50.52	46.25	47.87

1. The protocols for measuring greenhouse gas emissions differ between mandatory and voluntary reporting regimes, resulting in some differences in the table above compared to PG&E's emissions reported to the California Air Resources Board.

2. Because PG&E purchases a portion of its electricity from the wholesale market, we are not able to track some of our delivered electricity back to a specific generator. Therefore, there is some unavoidable uncertainty in PG&E's total emissions and emissions rate for delivered electricity.

PG&E's Scope 1, 2 and 3 Greenhouse Gas Emissions

(Million Metric Tons CO₂-e)¹

	2016	2017	2018
Scope 1	4.24	4.29	4.41
Scope 2	0.71	0.36	0.16
Scope 3 ^{2, 3}	45.57	41.59	43.31
Subtotal	50.52	46.25	47.87

1. Because PG&E purchases a portion of its electricity from the wholesale market, we are not able to track some of our delivered electricity back to a specific generator. Therefore, there is some unavoidable uncertainty in PG&E's total emissions and emissions rate for delivered electricity.

2. The emissions associated with purchased electricity are considered Scope 3 per The Climate Registry's Electric Power Sector Protocol for the Voluntary Reporting Program, Annex I to the General Reporting Protocol, June 2009, Version 1.0.

3. This figure includes 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 and gas delivered to PG&E facilities such as power plants, compressor stations and offices, the emissions of which are reported separately.

PG&E's Scope 1 Greenhouse Gas Emissions

(Million Metric Tons CO₂-e)

	2016	2017	2018
SF ₆ from Electrical Equipment	0.05	0.03	0.06
Facility Natural Gas Use	0.01	0.01	0.01
Gas Compressor Stations	0.26	0.23	0.25
Owned Fossil Generation	2.26	2.30	2.52
Process and Fugitive Emissions from Natural Gas System	1.54	1.62	1.47
Transportation	0.11	0.10	0.09
Total Scope 1 Greenhouse Gas Emissions	4.24	4.29	4.41

PG&E's Scope 2 Greenhouse Gas Emissions

(Million Metric Tons CO₂-e)

	2016	2017	2018
Electricity Transmission and Distribution Line Losses	0.68	0.34	0.14
Facility Electricity Use	0.03	0.02	0.01
Total Scope 2 Greenhouse Gas Emissions	0.71	0.36	0.16

PG&E's Scope 3 Greenhouse Gas Emissions

(Million Metric Tons CO₂-e)

	2016	2017	2018
Purchased Electricity (Net)	7.97	5.29	2.37
Customer Natural Gas Use ¹	37.59	36.29	40.93
Other Scope 3 emissions ²	0.01	0.01	0.01
Total Scope 3 Greenhouse Gas Emissions	45.57	41.59	43.31

1. This figure includes 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.

2. Other Scope 3 emissions include the greenhouse gas emissions from business air travel, waste management and employee commuting.



Natural Resource Stewardship

As one of the largest landowners in California, environmental stewardship is an essential component of our business. This includes working to protect threatened and endangered species and their habitats, safeguard watershed lands that we have committed to preserve in perpetuity and manage forested lands to minimize the threat of wildfire.

Our Approach

As we provide safe, reliable, affordable and clean energy to customers, we also strive to be responsible stewards of the lands we own and where we operate. This includes protecting endangered species and enhancing habitat at three PG&E facilities where we have Safe Harbor Agreements: Antioch Dunes in Contra Costa County, Tulare Hill in Santa Clara County and PG&E's hydro lands in Shasta County.

PG&E also employs Habitat Conservation Plans (HCP) to protect threatened and endangered species and their habitats.

PG&E's San Francisco Bay Area HCP protects 18 wildlife species and 13 plant species. Through this plan, PG&E maintains and operates gas and electric infrastructure throughout the nine Bay Area counties while protecting endangered wildlife, plant species and their habitats. In addition, our San Joaquin Valley HCP protects 23 wildlife and 42 plant species within nine counties of the San Joaquin Valley. In 2020, the U.S. Fish and Wildlife Service approved a Multi-Region HCP, which covers the remaining service area. A Mojave HCP, which is intended to provide incidental take coverage for two species in the desert region, is also under development.

PG&E maintains 52,000 acres of forested land, partnering with local communities in wildfire prevention programs and collecting and storing seeds from PG&E forested lands for future restoration purposes.

Additionally, as part of our Land Conservation Commitment, PG&E is permanently protecting more than 140,000 acres through the donations of fee title and conservation easements on watershed lands to public agencies and qualified conservation organizations. An independent nonprofit organization, the Pacific Forest and Watershed Lands Stewardship Council, identifies the organizations that receive these donations.

2019 Milestones

To expedite and streamline critical wildfire safety and infrastructure work while protecting endangered species and public lands, we achieved the following:

- **Obtained a five-year special use permit from the Golden Gate National Recreation Area** to streamline inspection and operation and maintenance activities in the park, the most visited National Park in the United States. The permit enables PG&E to conduct wildfire safety and other important maintenance activities with pre-negotiated resource protection measures. It was the first programmatic permit of this kind for the National Parks Service.
- **Received a new policy from the Bureau of Land Management (BLM)** to limit fire risk from power lines crossing BLM-managed public lands. The policy, which has been extended through 2020, allows PG&E to facilitate and expedite operations and maintenance activities necessary to reduce the risk of wildfire by conducting activities without prior authorization; instead, PG&E is required to notify the appropriate BLM Field Office within 30 days of completing the work.

PG&E also continues to work with the BLM on a programmatic right of way renewal process and operations and maintenance plan.

In support of our Land Conservation Commitment, PG&E:

- **Permanently protected 7,241 acres of land by completing 11 Land Conservation Commitment transactions.** Fee donations were completed on five separate PG&E properties, including the donation of 2,325 acres of property at Tásam Kojóm/Humbug Valley to the Maidu Summit Consortium. Other fee property recipients included the Potter Valley Tribe and California Department of Forestry and Fire Protection. Conservation easements were recorded on six separate PG&E properties.

We also achieved a number of milestones related to our Habitat Conservation Plans and other conservation commitments:

- **Submitted a Multi-Regional Habitat Conservation Plan for review** to the U.S. Fish and Wildlife Service. Once finalized, the plan will allow our long-term operations and maintenance activities to proceed without additional permitting across 34 counties in California. The plan will create a mechanism to protect 24 animal and 12 plant species, 35 of which are listed as threatened or endangered under the Endangered Species Act.
- **Actively managed more than 2,700 acres across 19 properties** for a variety of species and habitats. This effort is related to new and ongoing conservation commitments.
- **Secured and maintained the rights to conservation and preservation for more than 5,800 acres** of habitat for various resources. These future transactions are related to ongoing HCP development efforts and existing HCP conservation goals.
- **Purchased 818 acres of species, habitat or wetland credits for individual and programmatic permits.** This represents conservation of habitat for 11 different threatened or endangered species and three riparian/wetland habitat types across PG&E's service area.
- **Restored, enhanced or created 162 acres of riparian and species habitat.** This represents restoration, enhancement or creation of habitat for four threatened or endangered species within PG&E's service area..

Measuring Progress

PG&E restores and protects environmental habitats to fulfill state and federal regulatory requirements and to support voluntary environmental initiatives. In 2019, our efforts protected or restored 8,222 acres of habitat.

Protected And Restored Habitat¹

	2017	2018	2019
Acres set aside and protected	8,309 acres	13,971 acres	8,060 acre
Acres of restored habitat	1,269 acres	716 acres	162 acres

1. PG&E undertook these activities to meet various regulatory requirements.

Protecting Birds

Since 2002, PG&E has made more than 36,200 existing power poles and towers bird-safe. In that time, we have also retrofitted nearly 37,400 power poles in areas where bird injuries or fatalities or bird-related outages have occurred. In 2019, more than 7,000 poles in designated “Raptor Concentration Zones” were replaced and built to avian safe construction guidelines.



Water

Water remains a precious resource in California, and PG&E is committed to using it as responsibly as possible in our operations and at our facilities. We work to help our customers do the same, particularly in the Central Valley.

Our approach

Water is essential to operating our infrastructure—including our vast network of hydroelectric generating stations—just as it is essential to our customers in their daily lives. At the same time, about 20 percent of California's electricity usage goes toward moving, treating, disposing of, heating and consuming water. This connection, also known as the “water-energy nexus,” places PG&E in a unique position to help our state and our customers.

- PG&E is promoting sustainable water use in a number of ways:
- Strategically managing our power generation facilities,
- Reducing water consumption at PG&E offices and service yards, and
- Providing outreach and guidance to customers, particularly those in the agricultural community, on how to reduce water usage.

PG&E also reports its water data and strategies to the CDP, an international not-for-profit organization that requests information on behalf of institutional investors.

Power Generation

At the Diablo Canyon Power Plant, we use saltwater from the Pacific Ocean for once-through cooling, with a maximum discharge of 2.5 billion gallons per day, set by the facility's Clean Water Act permit. PG&E closely monitors the marine environment at the plant by conducting regular studies and sampling, also required under the plant's Clean Water Act permit.

The California Water Board adopted a policy in 2010 that generally requires power plants with once-through cooling to install cooling towers or other significant measures to reduce marine impacts by at least 85 percent. Diablo Canyon must comply with this policy by December 31, 2024. In January 2018, the California Public Utilities Commission approved a joint proposal to retire Diablo Canyon at the end of its current Nuclear Regulatory Commission licenses, November 2024 and August 2025. Until plant retirement, Diablo Canyon will pay an annual interim mitigation fee as required by the California Water Board policy.

PG&E relies on air for cooling at its three natural gas power plants: Humboldt Bay Generating Station, Gateway Generating Station and Colusa Generating Station.

Additionally, PG&E owns and operates one of the nation's largest investor-owned hydroelectric systems. Our hydroelectric power plants are largely non-consumptive, meaning that after water passes through turbines to produce electricity, it is returned to the river. In addition, PG&E's 1,212 MW Helms Pumped Storage Project uses water for energy storage to help balance daily variations in electric demand.

Water Conservation

PG&E's offices and service centers rely on water for restrooms, kitchens, mechanical system cooling, vehicle washing and landscape irrigation. We remain focused on identifying, reporting and repairing leaks quickly; managing our irrigation systems; installing low-flow plumbing fixtures; and replacing landscaping with drought-resistant approaches.

PG&E also offers customers a wide range of options to help them reduce their water use. Our water-saving solutions for residential customers include supporting markets for high-efficiency clothes washers and direct installation of low-flow shower heads and faucet aerators. We also offer incentives to agricultural customers who convert from sprinkler systems to water-efficient drip irrigation, as well as programs for energy-efficient pumping systems and more.

2019 Milestones

PG&E's efforts to conserve water and protect the watersheds where we operate in 2019 included:

- **Continued to offer rebates and incentives on water and energy-saving appliances and equipment.** Altogether, customers who participated in PG&E's programs reduced water usage by about 166 million gallons in 2019, based on an analysis of our most common energy-efficiency measures that deliver water savings.
- **Hosted the 16th-annual Water Conservation Showcase.** A variety of topics were discussed at the event, including the water efficient home of the future, the water-energy nexus, rainwater harvesting, and the essentials of community-wide fire protection. A range of institutions lent their expertise including the San Francisco Public Utilities Commission, Contra Costa Water District and the California Native Plant Society.
- **Repurposed water for beneficial reuse.** PG&E repurposed more than 11 million gallons of water used in hydrostatic testing for beneficial reuse, including toward irrigation, dust suppression, backfill compaction and project restoration—reseeding and watering all disturbed areas to return them to their pre-project state.

Measuring Progress

Water Use Statistics

	2017	2018	2019
Water Withdrawal (Saltwater and Freshwater) (thousand gallons)			
Process and Facilities Water (Saltwater)			
Diablo Canyon Power Plant ¹	834,495,352	855,098,304	756,054,502
Once-Through Cooling	834,166,000	854,778,000	755,762,000
Reverse Osmosis	329,352	320,304	292,502
Domestic and Process Water (Freshwater)			
Diablo Canyon Power Plant ²	5,627	13,310	17,110
Humboldt Bay Generating Station ¹	197	233	252
Gateway Generating Station ¹	18,621	14,425	17,416
Colusa Generating Station ¹	21,774	18,577	22,114
Facilities (Freshwater)			
Offices and Service Yards ³	123,419	121,447	124,244
Permitted Water Systems ⁴	85,016	122,718	129,594
Hydrostatic Testing (Freshwater)			
Water for Testing	41,420	4,757	15,983
Water Discharged (Saltwater and Freshwater) (thousand gallons)			
Water Discharge (Saltwater)⁵			
Diablo Canyon Power Plant	834,360,617	854,967,271	755,934,842
Domestic and Process Water (Freshwater)			
Diablo Canyon Power Plant (Permitted Discharge)	128,274	136,561	126,110
Humboldt Bay Generating Station (Sanitary Sewer)	134	87	99
Gateway Generating Station (Sanitary Sewer)	11,609	8,089	8,319
Colusa Generating Station ⁶	341	0	0
Hydrostatic Testing (Freshwater)			
Water from Testing ⁷	14,664	3,021	11,712

1. Net operating capacity on December 31, 2019: Diablo Canyon: 2,240 MW; Humboldt Bay Generating Station: 163 MW; Gateway Generating Station: 580 MW; Colusa Generating Station: 657 MW.

2. Freshwater sources consist of well water for backup and emergency purposes.

3. This figure represents all sites where water was consumed, and data was available for the 12-month period from October to September. The 2018 figure was updated with actual versus estimated usage.

4. PG&E monitors water usage at permitted public water systems owned and operated by PG&E. These systems are metered in accordance with state regulations.

5. These figures include once-through cooling discharge (equivalent to withdrawal amounts) plus estimated reverse osmosis system brine/backwash discharge.

6. Colusa Generating Station uses a zero-liquid discharge system. A septic system is used to manage sanitary waste.

7. In 2019, nearly three-fourths of the water used in hydrostatic testing was recycled or reused for irrigation, dust control or project restoration.



Greening Our Fleet

PG&E operates one of the cleanest transportation fleets in the energy industry, comprised of nearly 1,500 alternative fuel vehicles that range from hybrid-electric bucket trucks to compressed natural gas vehicles. By integrating the latest available technologies and partnering with automakers to meet needs unique to our fleet operations, PG&E is working to reduce emissions and operating costs.

Our Approach

We are committed to exceeding federal and state vehicle emissions and alternative fuel requirements. Federal regulations require that 90 percent 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&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 California Air Resources Board regulatory requirement.

2019 Milestones

Last year, PG&E invested in a number of new vehicles and technologies to further green our fleet. Among other efforts, we:

- **Promoted employee electric vehicle adoption through workplace charging.** PG&E installed nearly 50 chargers at our facilities in 2019—contributing to a total of 1,230 charge points at 117 locations across our service area.
- **Integrated driver feedback technology in multiple ways.** We installed telematics in nearly 7,700 vehicles and pieces of equipment by the end of 2019. We also transitioned to a next generation platform that will allow us to deploy the driver feedback technology to even more vehicles. In-cab alerts enabled on most of these vehicles can indicate hard braking, hard acceleration, exceeding the speed limit and other actions that help promote safe driving behavior and fuel efficiency.

- **Deployed four compressed natural gas warehouse tractors.** We worked with Peterbilt to construct and deploy four compressed natural gas fueled warehouse tractors to replace diesel units that each used about 5,000 gallons of diesel per year.
- **Continued transition from diesel to renewable diesel.** We rolled out renewable diesel to every practical PG&E-owned tank—using more than 2.6 million gallons of renewable diesel in our conventional vehicles and reducing associated carbon emissions.

Measuring Progress

PG&E managed approximately 13,000 on-road vehicles and related equipment in its fleet at the end of 2019. Of those, about 1,360 were electric-based and 65 were powered by compressed natural gas. Our network of electric charging stations is also growing: last year we surpassed 1,230 charge points at 117 locations across our service area.

We also maintain a network of 32 compressed natural gas vehicle refueling facilities, 24 of which are open to customers. PG&E uses its expertise to help commercial customers take advantage of this relatively low-emitting domestic alternative fuel in their own fleets.

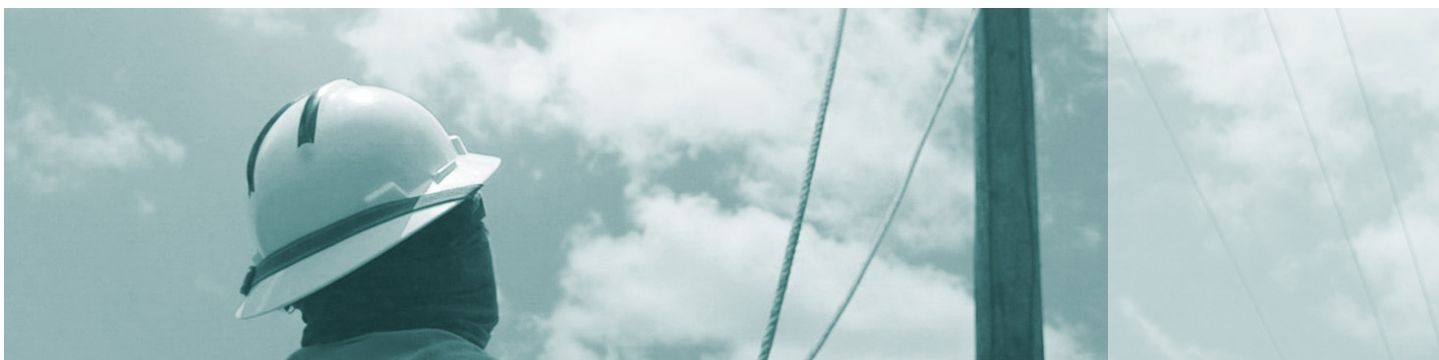
Fuel Use Statistics

PG&E uses petroleum and renewable diesel to power many of the vehicles in our fleet. The following chart shows PG&E's fuel usage over the past three years.

Transportation Fuel Consumed By Pacific Gas And Electric Company

	2017	2018	2019
Petroleum Consumed by PG&E Fleet (gallons)	10,649,458	9,706,779	9,623,552
Biodiesel and Renewable Diesel Consumed by PG&E Fleet (gallons) ¹	192,320	1,727,015	2,665,568

1. In 2017, PG&E began deploying a renewable diesel blend at a limited number of our fueling stations. The 2018 and 2019 figures represent renewable diesel.



Buildings and Facilities

Through sustainable design, increasing the efficiency of our energy and water usage, and eliminating waste, we are continually working to reduce the environmental footprint of our buildings and facilities. Our efforts also rely on the participation of our employees, who help us reach our goals.

Our Approach

Energy, Water and Waste

We continue to execute a multifaceted strategy to invest in key facility improvements, engage employees and incorporate sustainability principles and continuous improvement into our real estate management.

In 2019, we worked to use energy and water more efficiently and divert landfill waste from our office facilities and service yards. We also remained focused on building a more sustainable supply chain through environmentally preferable product choices and procurement strategies. We also powered our service centers—about 95 facilities in Northern and Central California—with 100 percent solar energy through Pacific Gas and Electric Company's Solar Choice program.

Improving Waste Recycling Compliance in San Francisco

At PG&E's General Office, we removed individual workstation waste bins on several floors and added new common area bin containers to allow for central sorting locations. Doing so helped improve sorting accuracy to achieve compliance with San Francisco's new recycling and composting ordinance for large waste generators.

Hazardous and Other Waste

As part of our course of business, certain activities generate hazardous wastes. Waste is also generated during the remediation and cleanup of legacy sites.

PG&E handles all hazardous waste in accordance with federal and state regulations. Our approach includes providing training and guidance to employees to ensure waste is properly managed from the point of generation to recycling or disposal.

Applicable federal and state hazardous waste management statutes include the Resource Conservation and Recovery Act and the Toxic Substances Control Act under federal requirements and Title 22 of the California Code of Regulations and the California Health and Safety Code. California laws and regulations are more stringent and encompass broader waste streams than federal requirements.

2019 Milestones

In 2019, we continued to operate and maintain our facilities using sustainable practices. Compared to 2018, aggregated energy use intensity decreased by 8 percent and water usage increased slightly by 2 percent. The results reflect continued efforts to execute in several strategic areas to improve facility sustainability performance:

- **Earned Leadership in Energy and Environmental Design (LEED) Gold certification for our Auburn Regional Service Center**, a 15-acre site with more than 200,000 square feet in six buildings. The two renovations and four new buildings are equipped with energy efficient HVAC systems, LED lighting, electric vehicle charging stations, native plant landscaping with drip system, PV solar and fixtures.
- **Received LEED Silver certification for our Livermore Electric Safety Academy's main building**, an approximately 20,000 square foot facility with many similar energy efficient features as Auburn, including drought tolerant landscaping with weather sensor irrigation equipment. We also submitted a LEED application, targeting Gold certification, for the new Substation Training Center building at the same Livermore facility, and anticipate confirmation in 2020.
- **Expanded our use of on-site renewable energy by completing the installation of solar photovoltaic systems at five different facilities:** 412-kW at Merced Service Center, 350-kW at Auburn Regional Center, 145-kW at Lemoore Service Center, 167-kW at Fresno Service Center and 356-kW at Livermore Electric Safety Academy. These new installations represent an increased electricity production of approximately 2.2 million kWh per year. Plans to complete new solar projects are in progress at two other facilities in 2020, which will add more than 1,000 kW to our solar portfolio.



Reusing and Recycling Office Furniture

For the past four years, we have been collecting excess materials from facilities across our service area to improve recycling and repurposing. This allows PG&E to reuse office and other materials, or put up items for auction, to avoid landfill waste. With 178 tons of recycled and reused items in 2019, we reduced life-cycle greenhouse gas emissions by about 415 metric tons of CO₂ based on U.S. EPA's Waste Reduction Model.

Measuring Progress

Energy Consumption Statistics

These figures represent electricity and natural gas usage at facilities managed by Pacific Gas and Electric Company's Corporate Real Estate Strategy and Services department.

Energy Consumed at Facilities¹

	2017	2018	2019
Electricity Consumed (gigawatt hours)	93	89	80
Natural Gas Consumed (million cubic feet)	136	136	133
Energy Intensity (million BTUs per square foot)²	61	57	53

1. The data reflects the 12-month period from December to November. Between 176 and 189 sites reported electricity data for 2017 to 2019 and between 118 to 136 sites reported natural gas data between 2017 and 2019.

2. Figures are reported in the industry standard of KBTU per square foot, which incorporates all the energy used in a facility into one comparative figure.

Water Use Statistics

In 2019, we tracked water use throughout the year. Please see the Water section for additional statistics on PG&E's water usage.

Water Consumed at Facilities¹

	2017	2018	2019
Water Consumed (gallons)	123,419,216	121,447,269	124,244,405
Water Intensity (gallons per square foot)	16.6	16.3	18.6

1. The data represents all sites managed by Pacific Gas and Electric Company's Corporate Real Estate Strategy and Services department where water was consumed, and data was available for the 12-month period from October to September. In 2019, 147 sites reported water data.

Waste Generation Statistics

PG&E strives to minimize the overall amount of waste we generate, while composting organic waste and recycling non-hazardous materials such as glass, paper and certain metals.

Waste Diversion at Facilities¹

	2017	2018 ²	2019
Total Waste Generated (tons)	27,255	—	21,604
Total Waste Diverted (tons)	21,411	—	16,427
Waste Diversion Rate	76.3%	—	76.0%

1. The tonnage data reflects all of the non-hazardous municipal waste at 103 to 115 sites managed by PG&E's Corporate Real Estate Strategy and Services department for the 12 months from October to September.

2. Data will become available during the 2020 reporting period.

Other waste reduction efforts in 2019 included:

- Recycling 32.6 million pounds of scrap iron, aluminum and copper from conductors, steel, meters, transformer oil and miscellaneous material. We recycled 19.7 million pounds of transformers; nearly 900,000 pounds of recovered meters; 154,000 pounds of HDPE plastic, including pipes and hard hats; 578,000 pounds of street-light fixtures; 2.1 million pounds of transformer oil; and 4.4 million pounds of miscellaneous materials such as glass and cardboard.
- Recycling 87 tons of e-waste, including consumer electronic devices, CPUs, monitors, servers, printers and other equipment.
- Recycling more than 330,000 pounds of steel from Humboldt Bay Power Plant and Diablo Canyon Power Plant.

PG&E Plans to Relocate Headquarters to Oakland

PG&E announced plans to relocate our headquarters from San Francisco to Oakland beginning in 2022. The move is part of PG&E's broader commitment to implement changes for the long-term benefit of customers and communities.

The new Oakland headquarters will be a better and more efficient use of space for PG&E's workforce and provide greater flexibility on layout and density to both promote workplace health and safety and accommodate potential new working arrangements in a post-COVID-19 environment. In addition, commutes should be easier for the majority of headquarters employees who already live in the East Bay.

PG&E expects the move to achieve near-term cost savings and result in substantially lower headquarters costs for PG&E over a long-term period. In addition, PG&E will request approval from the CPUC to return the net gain realized upon the future sale of our San Francisco headquarters to customers. These transactions are also expected to collectively have a positive impact on tax revenues for both San Francisco and Oakland.

The move is expected to occur in phases, and PG&E expects to remain in our current location until the move is complete in 2023. PG&E also plans to consolidate two other East Bay satellite office locations into the new Oakland headquarters, beginning in 2025. Subject to Bankruptcy Court approval and the satisfaction of certain conditions, PG&E will enter into a lease with purchase option for the Oakland property with leading Bay Area developer TMG Partners.

Hazardous and Other Waste

The following table provides statistics on PG&E's waste generation. While PG&E works to reduce hazardous waste, certain projects such as infrastructure upgrades or remediation of historical contamination may increase the amount generated in a given year.

Hazardous And Other Waste

	2017	2018	2019
Total Hazardous Waste (tons)	31,051	35,756	30,307
RCRA ¹ Hazardous Waste	1,820	2,286	2,676
TSCA ² Hazardous Waste	513	411	337
California Regulated Hazardous Waste	28,718	33,059	27,294

Federal Regulated Hazardous Waste (TSCA) – includes PCB Waste 50 ppm PCB (tons)

Total	513	411	337
Incineration	127	116	231
Landfill	360	182	71
Recycled	26	114	35
% Recycled	5.1%	27.6%	11%

California Regulated Hazardous Waste (Non-RCRA)⁴ (tons)

Total	28,718	33,059	27,294
Disposed	22,317	23,403	23,885
Recycled	6,401	9,656	3,408
% Recycled	22.3%	29.2%	12%

Other Waste

Universal Waste⁴ (tons)

Total	179	177	168
Recycled	179	177	168
% Recycled	100%	100%	100%

Low-Level Radioactive Waste Disposed (cubic feet)

Diablo Canyon Power Plant	647	609	516
Humboldt Bay Power Plant	714,836	213,170	6,239

Radioactively Cleared Waste Disposed (pounds)

<i>Diablo Canyon Power Plant</i>			
Disposed (pounds)	185,014	199,184	137,427
<i>Humboldt Bay Power Plant</i>			
Disposed (pounds)	13,148,362	42,669,730	18,173,850

Recycled Materials from Power Plants (pounds)

<i>Diablo Canyon Power Plant</i>			
Steel	0	0	80,000
Copper	0	0	0
Lead	0	0	0
E-Waste	0	0	946
<i>Humboldt Bay Power Plant</i>			
Steel	514,940	785,090	250,170
Copper	0	0	0
Lead	21,500	0	0

1. Refers to the Resource Conservation and Recovery Act (RCRA).

2. Refers to the Toxic Substances Control Act (TSCA).

3. These figures include polychlorinated biphenyl (PCB) waste < 50 ppm PCB.

4. Universal waste is comprised of seven categories: electronic devices, batteries, electric lamps, equipment with mercury, cathode ray tubes, glass from cathode ray tubes, and non-empty aerosol cans.

Air Emissions

To comply with local air quality regulations, PG&E is focused on minimizing air emissions from its conventional sources of power generation. The following figures reflect emissions from PG&E-owned generation sources.

Air Emissions¹

	2017	2018	2019
Total NO_x Emissions (tons)	155	134	135
Humboldt Bay Generating Station	31	23	29
Gateway Generating Station	78	67	64
Colusa Generating Station	45	44	42
NO_x Emissions Rates (lbs/MWh)			
Humboldt Bay Generating Station	0.15	0.12	0.14
Gateway Generating Station	0.06	0.05	0.05
Colusa Generating Station	0.04	0.03	0.03
Fossil Plants ²	0.05	0.04	0.04
All Plants ³	0.01	0.01	0.01
Total SO₂ Emissions (tons)	14	15	14
Humboldt Bay Generating Station	1	1	1
Gateway Generating Station	7	8	7
Colusa Generating Station	6	6	6
SO₂ Emissions Rates (lbs/MWh)			
Humboldt Bay Generating Station	0.004	0.005	0.005
Gateway Generating Station	0.005	0.005	0.005
Colusa Generating Station	0.005	0.004	0.004
Fossil Plants ²	0.005	0.005	0.004
All Plant ³	0.001	0.001	0.001
Total Particulate Matter Emissions (tons)	94	90	97
Humboldt Bay Generating Station	50	39	47
Gateway Generating Station	20	21	20
Colusa Generating Station	25	30	30
Total CO Emissions (tons)	58	39	34
Humboldt Bay Generating Station	24	19	17
Gateway Generating Station	14	6	6
Colusa Generating Station	20	14	11
Total VOC Emissions (tons)	61	48	56
Humboldt Bay Generating Station	49	35	44
Gateway Generating Station	7	8	7
Colusa Generating Station	5	5	5

1. Due to rounding conventions, some data above sum to an amount greater or less than the totals provided. Additionally, there were no reportable mercury air emissions from PG&E's facilities during 2017 to 2019.

2. Collective emission rates for Humboldt Bay, Gateway and Colusa Generating Stations.

3. Includes all PG&E-owned generation sources, including fossil fuels, nuclear, hydroelectric and renewable energy.



Supplier Sustainability

PG&E is working to embed sustainability considerations into our supply chain processes—from how we engage and select suppliers to how we choose our products and services. We consider supply chain sustainability from both an environmental and ethical business perspective. Doing so enables PG&E to reduce supply chain risk and pursue innovative products and services in our mission to deliver safe, affordable, reliable and clean energy to customers.

Our Approach

PG&E formalized a supply chain environmental sustainability program in 2007 by focusing on improving supplier performance and reducing environmental impact via product and service selections.

We ask suppliers to provide information on their sustainable performance in several ways, through requests for proposals, supplier scorecard reviews and participation in an annual sustainability survey. We use the information from these requests in selecting suppliers and to guide our strategies to educate suppliers and improve performance. In addition, we seek to identify product and service strategies that measurably improve our environmental profile, using the “reduce-reuse-recycle” framework to guide our plans:

- **Reduce** resource consumption through our purchasing choices. Where there is no feasible option to reduce consumption, we seek to buy products and equipment with a lower environmental footprint.
- **Reuse** products and equipment when they can be repaired or refurbished to meet required performance standards.
- **Recycle** products and equipment with licensed vendors if they cannot be refurbished for reuse.

When recycling options are not available, we dispose of products in compliance with environmental requirements.

Our Supplier Code of Conduct sets forth the principles and ethical business standards of conduct that we expect suppliers to meet during the provision of goods and services. As business needs have evolved, so has the code and our efforts to engage suppliers in understanding their obligations to meet PG&E's expectations.

We highlight the code during the RFP process and reference it in our contracts where suppliers acknowledge reading and complying with the code. It is also a focus of supplier training. We perform periodic assessments to check supplier conformance to our code, identify areas for improved education and training, and support supplier corrective actions, as needed.

Partnering with Industry Peers

PG&E continues to partner with industry peers through the Electric Utility Industry Sustainable Supply Chain Alliance (Alliance), a consortium of 19 electric energy providers across the country. PG&E cofounded the Alliance in 2008 to advance sustainable business practices among utilities and industry suppliers. The Alliance provides a forum to benchmark our performance and the performance of our suppliers, and to share best practices. In 2019, Alliance efforts focused on material end of life recycling, peer-to-peer knowledge sharing, and the social aspects of sustainability.

2019 Milestones

In 2019, PG&E's supply chain sustainability efforts focused on increasing supplier engagement and education. Highlights included:

- **Benchmarked our supply chain environmental performance for continuous improvement.** For the fifth year in a row, we benchmarked as a leader among electric providers in the Alliance's Supply Chain Environmental Management Framework.
- **Enhanced survey tool to gather supplier environmental data and metrics.** PG&E led a multi-utility effort to enhance the online survey tool, The Sustainability Project, to capture supplier environmental performance results in the areas of waste, water, energy and greenhouse gas emissions. Through the tool, we asked suppliers to share their data, metrics and improvement targets and used the reported greenhouse gas data to begin assessing Scope 3 emissions.
- **Updated workshops focused on environmental sustainability and supplier code of conduct.** We expanded our environmental sustainability trainings to include three in-person workshops: one that targets diverse businesses called Diverse Suppliers Go Green; one that educates suppliers on how to meet our expectations to measure, reduce and publicly report environmental performance; and one that teaches suppliers to track and report greenhouse gas emissions. Based on supplier feedback, we also updated our in-person supplier code of conduct trainings to provide a full understanding of the code and review the importance of risk assessments and robust management systems in maintaining a code that meets customer expectations.
- **Encouraged supplier speak up.** Throughout the year, we leveraged opportunities to communicate about our Supplier Code of Conduct and the importance of suppliers speaking up about misconduct issues and concerns. For example, during training sessions, we reminded suppliers of the various pathways available for them to speak up and report misconduct issues or concerns.

PG&E worked with a woman-owned business to replace existing workstations with smaller workstations in the same office footprint. The supplier used remanufactured materials to perform the work, helping PG&E conserve more than 1 million pounds of raw materials, prevent 400,000 pounds of waste and avoid nearly 200 metric tons of carbon dioxide. The remanufactured furniture meets the same environmental requirements as other furniture options.

Measuring Progress

In 2019, we requested sustainability survey responses from 268 suppliers and achieved a 73 percent response rate, which represented 68 percent of PG&E's spending.

Through the survey tool, suppliers complete a self-assessment that measures their adoption of environmental best practices specific to their industry. This information provides the supplier with detailed benchmarking that can be used to prioritize strategies to reduce their environmental impact. In addition, suppliers can provide their most recent environmental performance data for energy and water use, as well as greenhouse gas emissions and waste generation. PG&E gains insight into how our suppliers compare to all suppliers answering the survey for other Alliance members.

Annually, we benchmark our supply chain environmental sustainability performance against the other Alliance members. PG&E's suppliers have demonstrated leadership in tracking environmental impacts and setting voluntary reduction goals compared to all suppliers surveyed by Alliance members.

PG&E Supplier Engagement in Environmental Management Compared to Aggregated Alliance Suppliers

Percentage of Suppliers Tracking Impacts	Alliance Suppliers	PG&E Top-Tier Suppliers
Measure environmental performance	35%	93%
Setting reduction targets	23%	52%
Public reporting of environmental performance	13%	46%

Additionally, PG&E's Supply Chain Environmental Sustainability Program continued to lead among Alliance peers across different attributes. For example, some of the attributes benchmarked include supply chain management engagement and commitment, environmental expectations and standards for suppliers, and supplier performance evaluation.

PG&E Supply Chain Sustainability Benchmarked Performance

	2018	2019
Percentage of attributes outperforming Alliance peers	75%	75%
Percentage of attributes at or better than Alliance peers	100%	100%

In 2019, 62 percent of PG&E's top-tier suppliers received a score of three or higher on a five-point scale, falling short of our target of 75 percent. Suppliers earn two points for assessing their current performance, two points for setting reduction targets, and one point for publicly reporting environmental performance. The survey was enhanced in 2019 to capture reduction target data. Suppliers not providing specific information on reduction targets were the primary driver of not meeting the goal. In response, PG&E is increasing efforts to educate suppliers on setting and sharing environmental reduction targets.

Performance Against PG&E's Supplier Environmental Performance Standard¹

Percentage of PG&E Top-Tier Suppliers Aligning with Expectations	2014	2019
Measure environmental performance	70%	93%
Setting reduction targets	66%	52%
Public reporting of environmental performance	41%	46%

1. In 2018, PG&E revised the methodology for assessing survey responses due to the implementation of a new survey tool. In the table above, data for 2014 was updated to align with the 2018 calculation methodology.



Historic Impacts

PG&E's environmental remediation program addresses contamination resulting from the historical operations of Pacific Gas and Electric Company and its predecessor companies dating as far back as the mid- to late-1800s. Our overarching goal is to clean up historical impacts by using leading-edge technical approaches and best practices for engaging local stakeholders and suppliers.

Our Approach

PG&E remains committed to safely incorporating sustainable remediation practices and technologies into site cleanups. Since 2010, we have partnered with the California Department of Toxic Substances Control (DTSC) to implement our sustainable remediation approaches.

Involving the community early is a vital component of our remediation efforts. Locally, we communicate with city leaders, local businesses, community groups, and residents to promote awareness, solicit feedback and identify core issues of interest in our remediation projects. We partner on initiatives to address these issues, including hiring local unemployed residents, developing property disposition strategies that align with remediation efforts and sourcing local goods and services.

In addition, PG&E continues to deliver economic, social and environmental benefits through its environmental remediation work. Our work includes soil and groundwater cleanups, and field testing cutting-edge cleanup technologies to lower greenhouse gas emissions and minimize community impacts. In 2019, these activities contributed \$5.5 million to the local economies near our project sites.

2018 Milestones

Natural Gas Compressor Stations

PG&E's natural gas system includes eight compressor stations that receive and move natural gas throughout our service area. During the 1950s and 1960s, long before recognition of the environmental standards to which we adhere today, Pacific Gas and Electric Company used hexavalent chromium to prevent rust in cooling towers at the Topock and Hinkley compressor stations—a common industry practice at the time. These operations resulted in groundwater contamination, and PG&E continues to work diligently under the oversight of state and federal agencies and in coordination with local Native American tribal governments to address these legacy impacts.

At the Topock Compressor Station, we completed the design and permitting process and are constructing the long term groundwater remedy. The DTSC and the U.S. Department of the Interior approved the remedy design in April 2018 and DTSC also certified the Subsequent Environmental Impact Report. Construction of the first phase of remedy facilities started in October 2018 and will continue for approximately two years.

We also conducted soil investigation work in and around the compressor station property after years of planning and review with regulators and tribes. The data collected were used to develop a risk assessment that will help determine soil cleanup work that might be needed in the future. PG&E continues to work with agencies and stakeholders as the risk assessment is approved and an Engineering Evaluation/Cost Assessment (EE/CA) is developed for the U.S. Department of Interior. An approved EE/CA will allow expedited remediation of contaminated soil.

While the long-term groundwater remedy is being finalized, we continued operations of interim groundwater measures, which operate around the clock to help ensure that the Colorado River is protected from impacts. Built in 2005, the system has successfully controlled groundwater contamination, treating almost 960 million gallons of groundwater and removing more than 7,850 pounds of chromium.

PG&E also remains committed to protecting public health and safety while remediating the environment and responding to community concerns at the Hinkley Compressor Station. Through 2019, we estimate that at least two-thirds of the chromium present in the groundwater has been removed.

We also continue to work with community stakeholders to improve our local presence in the Hinkley community and support community investment priorities focusing on youth, health and wellness, education and workforce development.

Manufactured Gas Plant Sites

We continue to make progress as we voluntarily address over 40 Manufactured Gas Plant (MGP) sites previously owned or operated by Pacific Gas and Electric Company or its predecessor companies. MGPs were located throughout PG&E's service area and across the country and used coal and oil to produce gas for lighting, heating and cooking in the mid- to late-1800s and early 1900s, until natural gas arrived in the 1930s.

In 2019, cleanup was completed at the offshore portion of the former Potrero Power Plant and MGP site in San Francisco, and we are working on documenting our cleanup activities and developing any necessary site maintenance plans.

Highlights include:

- **Prepared properties for future uses.** Cleanup work at the Potrero site in 2019 focused on the offshore sediments area. This work, combined with earlier work along the waterfront, will position the Potrero Power Plant site and Pier 70 properties for productive reuse.
- **Hired local workers as part of the Topock, Hinkley and Potrero projects.** PG&E has adopted a local-hiring strategy that has benefitted unemployed and homeless residents, often leading to future full-time jobs.



As one example, Isaac Baker has worked as a flagger on several projects as a result of PG&E's partnership with the Downtown Streets Team, an organization that uses an award-winning work experience program to help combat homelessness.

Local Hiring Efforts

In 2008, PG&E's environmental remediation department started a local hire program in response to community requests to put local unemployed individuals and young adults to work in support positions on cleanup projects. To date, the program has put 300 unemployed individuals back to work as general laborers, flaggers and administrative assistants.

PG&E partners with community-based organizations and city employment programs to identify qualified and committed job candidates. Individuals are provided a living wage and receive training and mentoring consistent with their positions to ensure success. We also work closely with our contractors to implement the program.

Organizations that we have partnered with include Downtown Streets Team, Saint Vincent DePaul's, Salvation Army, Hinkley Career Training, and various local workforce development boards and homeless service providers.

Measuring Progress

Sustainable Remediation

In 2019, we reduced cumulative greenhouse gas emissions by 485 metric tons and liquid wastes by 6.4 million gallons. We 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 aim to source our equipment and vendors from the local community. In 2019, we added about \$5.5 million to the local economies near our project sites.

At our Marina project in San Francisco, we continued to use the e240 Electric Mini Excavator, the first in the world to match the performance metrics of a diesel-powered unit with a lithium-ion battery. The advantages of using this innovative equipment include using clean energy, less noise and fewer emissions.

Global Reporting Initiative

PG&E is committed to continuous improvement when it comes to how we report our impacts and sustainable business strategies, and we use the Global Reporting Initiative (GRI) as an important guide and reference point. The table below shows how this report aligns with GRI's Sustainability Reporting Guidelines, and was developed in accordance with a core adherence level. While we are working to meet the GRI reporting protocols, we currently only partially meet the recommended standard for several indicators below.

General Standard Disclosures

G4 Indicator	Description	2020 Report Location
Strategy and Analysis		
G4-1	Statement from the most senior decision-maker	Message from Our Leadership
G4-2	Description of key impacts, risks, and opportunities	Integrating Sustainability Key Sustainability Indicators
Organizational Profile		
G4-3	Name of the organization	Home Page
G4-4	Primary brands, products, and/or services	PG&E Overview
G4-5	Location of organization's headquarters	PG&E Overview
G4-6	Countries in which the company has operations	PG&E Overview
G4-7	Nature of ownership and legal form	PG&E Overview
G4-8	Markets served	PG&E Overview
G4-9	Scale of the reporting organization	PG&E Overview PG&E Corporation and Pacific Gas and Electric Company 2019 Annual Report
G4-10	Gender breakdown of employees	Diversity & Inclusion
G4-11	Percentage of employees covered by collective bargaining agreements	Building the Workforce of the Future
G4-13	Significant changes during reporting period of organization's size, structure, ownership or supply chain	Plan of Reorganization Commitments
G4-EU1	Installed capacity (MW)	PG&E Overview
G4-EU2	Net energy output (GWh)	PG&E Overview
G4-EU3	Number of residential, industrial, institutional, and commercial customer accounts	PG&E Overview
G4-EU4	Length of transmission and distribution lines	PG&E Overview
G4-EU5	Allocation of CO ₂ -e emissions allowances	PG&E Corporation's Climate Change 2019 Information Request response, pgs. 96-97
Commitments to External Initiatives		
G4-14	Explanation of whether and how the precautionary approach or principle is addressed by the organization	Risk Management Ethics and Compliance
G4-15	Externally developed economic, environmental, and social charters	Engaging Stakeholders
G4-16	Memberships in associations	Public Policy Engagement Climate Change

Identified Material Aspects and Boundaries		
G4-17	Operational structure of the organization	PG&E Overview
G4-18	Process for defining report content	Integrating Sustainability
G4-19	Material aspects identified	Integrating Sustainability
G4-20 G4-21	Boundaries of material aspects	Throughout the report, when we refer to “PG&E” we are discussing all of PG&E Corporation and its subsidiaries, including Pacific Gas and Electric Company. For specific issues, data and discussion about other entities—such as suppliers or customers—may be disclosed.
G4-22	Explanation of the effect of any re-statements of information provided in earlier reports	No significant re-statements of information
G4-23	Significant changes from previous reporting periods in the scope, boundary, or measurement methods applied in the report	No significant changes in scope, boundary or measurement methods
Stakeholder Engagement		
G4-24	Stakeholder groups engaged by the organization	Engaging Stakeholders
G4-25	Identification and selection of stakeholders	Engaging Stakeholders
G4-26	Approaches to stakeholder engagement	Engaging Stakeholders Integrating Sustainability
G4-27	Key topics and concerns raised through stakeholder engagement	Engaging Stakeholders Integrating Sustainability
Report Profile		
G4-28	Reporting period	Home Page; 2019–2020
G4-29	Date of most recent previous report	September 2019
G4-30	Reporting cycle	Integrating Sustainability; Annual
G4-31	Contact point for questions regarding the report	Feedback
G4-32	GRI index	GRI Index This report contains Standard Disclosures from the GRI Sustainability Reporting Guidelines.
G4-33	Policy and current practice with regard to seeking external assurance for the report	PG&E has not sought external assurance of its Corporate Responsibility and Sustainability Report. However, some data (such as greenhouse gas emissions) are third-party verified; where this is the case, it is noted in the report.
Governance		
G4-34	Governance structure of the organization, including committees overseeing sustainability	Corporate Governance Integrating Sustainability
G4-35	Process for delegating sustainability authority from board to executives	Integrating Sustainability
G4-36	Executive-level position over sustainability efforts	Integrating Sustainability
G4-37	Stakeholder consultation process on sustainability topics	Engaging Stakeholders
G4-38	Composition of the highest governance body and committees	2019 PG&E Corporation and Pacific Gas and Electric Company Joint Proxy Statement, p. 35
G4-39	Indicate whether the Chair of the highest governance body is an executive officer	2019 PG&E Corporation and Pacific Gas and Electric Company Joint Proxy Statement, p. 33
G4-40	Process for determining the composition, qualifications, and expertise of the members of the highest governance body.	2019 PG&E Corporation and Pacific Gas and Electric Company Joint Proxy Statement, p. 36–38
G4-41	Processes for the highest governance body to ensure conflicts of interest are avoided	2019 PG&E Corporation and Pacific Gas and Electric Company Joint Proxy Statement, p. 37

G4-42	Roles in updating company sustainability statements and goals	Integrating Sustainability
G4-44	Processes for evaluating the highest governance body's own performance	PG&E Corporate Governance Guidelines
G4-46	Board oversight of sustainability risk management	Integrating Sustainability
G4-47	Frequency of the highest governance body's review of sustainability issues	Integrating Sustainability
G4-48	Highest committee or position that formally reviews and approves the organization's sustainability report	This report has been approved by PG&E Corporation's Interim CEO and President, as well as the company's officers.
G4-51	Linkage between compensation and the organization's performance	Integrating Sustainability
G4-52	Process for determining remuneration	2019 PG&E Corporation and Pacific Gas and Electric Company Joint Proxy Statement, p. 46–94
G4-53	How stakeholders' views are sought and taken into account regarding remuneration	Corporate Governance
G4-56	Corporate mission and values, codes of conduct and principles	Integrating Sustainability Risk Management Corporate Governance Ethics and Compliance
G4-57	Mechanisms for seeking advice on ethical and lawful behavior	Ethics and Compliance PG&E Compliance and Ethics
G4-58	Mechanisms for reporting concerns about unethical or unlawful behavior	Ethics and Compliance PG&E Employee Code of Conduct—How to Raise Concerns

Specific Standard Disclosures

Material Aspect	G4 Indicator	Description	2020 Report Location
Economic			
Economic Performance	Disclosure of Management Approach (G4-DMA)		PG&E Corporation and Pacific Gas and Electric Company 2019 Annual Report
	G4-EC1	Direct economic value generated and distributed	PG&E Overview
	G4-EC2	Financial implications and other risks and opportunities for the organization's activities due to climate change	Climate Change
	G4-EC3	Coverage of the organization's defined benefit plan obligations	PG&E Corporation and Pacific Gas and Electric Company 2019 Annual Report, p. 167–170
Indirect Economic Impacts	Disclosure of Management Approach (G4-DMA)		Integrating Sustainability Energy Affordability Community Investments
	G4-EC7	Development and impact of infrastructure investments and services provided primarily for public benefit	Community Investments
	G4-EC8	Understanding and describing significant indirect economic impacts, including the extent of impacts	Community Investments Nuclear Operations
Availability and Reliability	Disclosure of Management Approach (G4-DMA)		Renewable Energy
	G4-EU10	Planned capacity against projected electricity demand over the long term	Renewable Energy
Demand-Side Management	Disclosure of Management Approach (G4-DMA)		Customer Energy Efficiency Demand Response

Research and Development	Disclosure of Management Approach (G4-DMA)		Electric Operations
Plant Decommissioning	Disclosure of Management Approach (G4-DMA)		Nuclear Operations
Environmental			
Energy	Disclosure of Management Approach (G4-DMA)		Renewable Energy Customer Energy Efficiency Buildings and Facilities
	G4-EN3	Energy consumption within the organization	PG&E Overview Renewable Energy Buildings and Facilities
	G4-EN4	Energy consumption outside of the organization	PG&E Overview Renewable Energy
	G4-EN6	Energy saved due to conservation and efficiency improvements	Customer Energy Efficiency Buildings and Facilities
	G4-EN7	Initiatives to provide energy-efficient or renewable-energy-based products and services, and reductions in energy requirements as a result of these initiatives	Engaging Customers Energy Affordability Customer Energy Efficiency Demand Response Distributed Generation and Storage Renewable Energy
Water	Disclosure of Management Approach (G4-DMA)		Water
	G4-EN8	Total water withdrawal by source	Water
	G4-EN9	Water sources significantly affected by withdrawal of water	Water Hydroelectric Operations Natural Resource Stewardship
Biodiversity	Disclosure of Management Approach (G4-DMA)		Natural Resource Stewardship
	G4-EN12	Description of significant impacts of activities, products, and services on biodiversity	Natural Resource Stewardship
	G4-EN13	Habitats protected or restored	Natural Resource Stewardship
Emissions	Disclosure of Management Approach (G4-DMA)		Climate Change Buildings and Facilities
	G4-EN15	Direct greenhouse gas emissions (Scope 1)	Climate Change
	G4-EN16	Indirect greenhouse gas emissions (Scope 2)	Climate Change
	G4-EN17	Other relevant indirect greenhouse gas emissions (Scope 3)	Climate Change
	G4-EN18	Greenhouse gas emissions intensity	Climate Change
	G4-EN19	Reduction of greenhouse gas emissions	Climate Change
	G4-EN21	NO _x , SO _x , and other significant air emissions by type and weight	Buildings and Facilities

Effluents and Waste	Disclosure of Management Approach (G4-DMA)		Compliance Buildings and Facilities
	G4-EN22	Total water discharge by quality and destination	Water
	G4-EN23	Total weight of waste by type and disposal method	Buildings and Facilities
	G4-EN24	Total number and volume of significant spills	Compliance
	G4-EN25	Weight of transported, imported, exported or treated waste deemed hazardous under the terms of the Basel Convention Annex I, II, III and VIII	Buildings and Facilities
Products and Services	Disclosure of Management Approach (G4-DMA)		Renewable Energy
	G4-EN27	Initiatives to mitigate environmental impacts of products and services, and extent of impact mitigation	Renewable Energy Hydroelectric Operations Conventional Sources Nuclear Operations Customer Energy Efficiency Demand Response Distributed Generation and Storage Natural Resource Stewardship
Compliance	Disclosure of Management Approach (G4-DMA)		Compliance
	G4-EN29	Monetary value of significant fines and total number of non-monetary sanctions for non-compliance with environmental laws and regulations	Compliance
Transport	Disclosure of Management Approach (G4-DMA)		Greening Our Fleet
	G4-EN30	Significant environmental impacts of transporting products and other goods and materials used for the organization's operations, and transporting members of the workforce	Greening Our Fleet
Supplier Environmental Assessment	Disclosure of Management Approach (G4-DMA)		Supplier Sustainability
	G4-EN32	Percentage of new suppliers screened using environmental criteria	Supplier Sustainability
Social			
Employment	Disclosure of Management Approach (G4-DMA)		Employees Career Pathways Workplace Safety
	G4-LA1	Total number and rate of employee turnover by age group, gender and region	Career Pathways
	G4-LA2	Benefits provided to full-time employees that are not provided to temporary or part-time employees	Health and Wellness Our Benefits
	G4-EU15	Percentage of employees eligible to retire in the next five years	Career Pathways
Labor/ Management Relations	Disclosure of Management Approach (G4-DMA)		Building the Workforce of the Future
Occupational Health and Safety	Disclosure of Management Approach (G4-DMA)		Safety Culture Workplace Safety
	G4-LA6	Rates of injury, occupational diseases, lost days, and absenteeism, and number of work-related fatalities by region	Workplace Safety

Training and Education	Disclosure of Management Approach		Career Pathways
	G4-LA10	Programs for skills management and lifelong learning	Career Pathways Employees - Introduction
Diversity and Equal Opportunity	Disclosure of Management Approach		Diversity and Inclusion
	G4-LA12	Composition of governance bodies and breakdown of employees per category according to gender, age group, minority group membership, and other indicators of diversity	Diversity and Inclusion 2019 PG&E Corporation and Pacific Gas and Electric Company Joint Proxy Statement, p. 20–29
Local Communities	Disclosure of Management Approach (G4-DMA)		Engaging Stakeholders
Anti-Corruption	Disclosure of Management Approach (G4-DMA)		Ethics and Compliance
	G4-SO4	Communication and training on anti-corruption policies and procedures	Ethics and Compliance
	G4-SO5	Confirmed incidents of corruption and actions taken	Ethics and Compliance
Public Policy	Disclosure of Management Approach (G4-DMA)		Public Policy Engagement
	G4-SO6	Total value of financial and in-kind contributions to political parties, politicians, and related institutions	Public Policy Engagement
Compliance	Disclosure of Management Approach (G4-DMA)		Ethics and Compliance
	G4-SO8	Monetary value of significant fines for noncompliance with laws and regulations	PG&E Overview
Disaster/ Emergency Planning and Response	Disclosure of Management Approach (G4-DMA)		Public Safety
Customer Health and Safety	Disclosure of Management Approach (G4-DMA)		Public Safety
Product and Service Labeling	Disclosure of Management Approach (G4-DMA)		Customers and Communities
	G4-PR5	Results of surveys measuring customer satisfaction	Engaging Customers
Customer Privacy	Disclosure of Management Approach (G4-DMA)		Public Safety
Access	Disclosure of Management Approach (G4-DMA)		Energy Affordability
	G4-EU28	Power outage frequency	Electric Operations
	G4-EU29	Average power outage duration	Electric Operations
	G4-EU30	Average plant availability factor by energy source	Conventional Sources Nuclear Operations
Provision of Information	Disclosure of Management Approach (G4-DMA)		Public Safety Engaging Customers

Sustainability Accounting Standards Board (SASB) Index

PG&E is committed to continuous improvement when it comes to how we report our impacts and sustainable business strategies. The table below reflects PG&E's first year reporting metrics in accordance with the Sustainability Accounting Standards Board (SASB) voluntary reporting framework. Unless otherwise noted, our response reflects year-end 2019 performance. Data included in this disclosure may differ from other disclosures in order to conform to the SASB reporting requirements.

Electric Utilities Standard

SASB Code	Accounting Metric	Unit of Measure	PG&E Response
Greenhouse Gas Emissions and Energy Resource Planning			
IF-EU-110a.1	Gross global Scope 1 emissions¹	Metric tons CO₂e	4,406,491
	Percentage covered under emissions-limiting regulations¹	Percentage (%)	62%
	Percentage covered under emissions-reporting regulations¹		99%
IF-EU-110a.2	Greenhouse gas emissions associated with power deliveries¹	Metric tons CO₂e	4,889,538
IF-EU-110a.3	Discussion of long-term and short-term strategy or plan to manage Scope 1 emissions, emissions reduction targets, and an analysis of performance against those targets	N/A	Climate Change
IF-EU-110a.4	Number of customers served in markets subject to renewable portfolio standards (RPS)	Number	5,484,479
	Percentage fulfillment of RPS target by market	Percentage (%)	100%
Air Quality			
IF-EU-120a.1	NO _x	Metric tons	123
	SO _x		13
	Particulate matter (PM ₁₀)		82
	Lead (Pb)		0
	Mercury (Hg)		0
	Percentage of NO _x in or near areas of dense population	Percentage (%)	100%
	Percentage of SO _x in or near areas of dense population		100%
	Percentage of particulate matter (PM ₁₀) in or near areas of dense population		100%
	Percentage of lead (Pb) in or near areas of dense population		0%
	Percentage of mercury (Hg) in or near areas of dense population		0%
Water Management			
IF-EU-140a.1	Total water withdrawn	Thousand cubic meters (m³)	Saltwater: 2,861,978 Freshwater: 1,237
	Total water consumed		Freshwater: 772
	Percentage of total water withdrawn in regions with high or extremely high baseline water stress	Percentage (%)	Saltwater: 0% Freshwater: 18%
	Percentage of total water consumed in regions with high or extremely high baseline water stress		Saltwater: 0% Freshwater: 25%
IF-EU-140a.2	Number of incidents of non-compliance associated with water quantity and/or quality permits, standards, and regulations	Number	0
IF-EU-140a.3	Description of water management risks and discussion of strategies and practices to mitigate those risks	N/A	Water

SASB Code	Accounting Metric	Unit of Measure	PG&E Response
Coal Ash Management			
IF-EU-150a.1	Amount of coal combustion residuals (CCR) generated	Metric tons	PG&E does not have coal operations
	Percentage CCR recycled	Percentage (%)	PG&E does not have coal operations
IF-EU-150a.2	Total number of CCR impoundments, broken down by hazard potential classification and structural integrity assessment	Number	PG&E does not have coal operations
Energy Affordability			
IF-EU-240a.1	Average retail electric rate for residential customers	USD/KWh	\$0.17617
	Average retail electric rate for commercial customers		\$0.16704
	Average retail electric rate for industrial customers		\$0.10152
IF-EU-240a.2	Typical monthly electric bill for residential customers for 500 kWh	USD	\$125.74
	Typical monthly electric bill for residential customers for 1,000 kWh		\$270.34
IF-EU-240a.3	Number of residential customer electric disconnections for non-payment	Number	213,123
	Percentage of residential customer electric disconnections for non-payment reconnected within 30 days	Percentage (%)	88%
IF-EU-240a.4	Discussion of impact of external factors on customer affordability of electricity, including the economic conditions of the service territory	N/A	Energy Affordability
Workforce Health and Safety			
IF-EU-320a.1 ²	Total recordable incident rate	Rate per 100 full-time workers	3.29
	Fatality rate		0
	Near miss frequency rate		5.36
End-Use Efficiency and Demand			
IF-EU-420a.1	Percentage of electric utility revenues from rate structures that are decoupled	Percentage (%)	100%
IF-EU-420a.2	Percentage of electric load served by smart grid technology (SmartMeters)	Percentage (%) by megawatt hours (MWh)	99%
IF-EU-420a.3	Customer electricity savings from efficiency measures	Megawatt hours (MWh)	1,253,200
Nuclear Safety and Emergency Management			
IF-EU-540a.1	Total number of nuclear power units, broken down by U.S. Nuclear Regulatory Commission (NRC) Action Matrix Column	Number	2
IF-EU-540a.2	Description of efforts to manage nuclear safety and emergency preparedness	N/A	Nuclear Operations
Grid Resiliency			
IF-EU-550a.1	Number of incidents of non-compliance with physical and/or cybersecurity standards or regulations	Number	This information is confidential
IF-EU-550a.2	System Average Interruption Duration Index (SAIDI)	Minutes	148.8
	System Average Interruption Frequency Index (SAIFI)		1.129
	Customer Average Interruption Duration Index (CAIDI)		131.9

SASB Code	Accounting Metric	Unit of Measure	PG&E Response
Activity Metrics			
IF-EU-000.A	Number of residential customers served	Number	4,810,736
	Number of commercial customers served		546,860
	Number of industrial customers served		1,202
IF-EU-000.B	Total electricity delivered to residential customers	Megawatt	27,513,436
	Total electricity delivered to non-residential customers	hours (MWh)	50,558,205
IF-EU-000.C	Length of distribution lines	Kilometers (km)	172,200
	Length of transmission lines		28,968
IF-EU-000.D	Total electricity generated	Megawatt hours (MWh)	33,849,390
	Percentage by major energy source	Percentage (%)	Renewable Energy
	Percentage in regulated markets		100%

1. Reflects 2018 greenhouse gas emissions given that 2019 emissions are currently undergoing third-party verification.

2. Data for PG&E employees.

Gas Utilities Standard

SASB Code	Accounting Metric	Unit of Measure	PG&E Response
Energy Affordability			
IF-GU-240a.1	Average retail gas rate for residential customers	USD/MMBtu	\$1.37955
	Average retail gas rate for commercial and industrial customers		\$1.07422
	Average retail gas rate for transportation services only		\$0.40091
IF-GU-240a.2	Typical monthly gas bill for residential customers for 50 MMBtu of gas delivered per year	USD	\$57.47
	Typical monthly gas bill for residential customers for 100 MMBtu of gas delivered per year		\$114.96
IF-GU-240a.3	Number of residential customer gas disconnections for non-payment	Number	676
	Percentage of residential customer gas disconnections for non-payment, reconnected within 30 days	Percentage (%)	50%
IF-GU-240a.4	Discussion of impact of external factors on customer affordability of gas, including the economic conditions of the service territory	N/A	Energy Affordability
End-Use Efficiency			
IF-GU-420a.1	Percentage of gas utility revenues from rate structures that are decoupled	Percentage (%)	100%
IF-GU-420a.2	Customer gas savings from efficiency measures	Million British Thermal Units (MMBtu)	2,759,340
Integrity of Gas Delivery Infrastructure			
IF-GU-540a.1	Number of reportable pipeline incidents	Number	4
	Number of Corrective Action Orders (CAO)		0
	Number of Notices of Probable Violation		53
IF-GU-540a.2	Percentage of distribution pipeline that is cast and/or wrought iron	Percentage (%) by length	0.001%
	Percentage of distribution pipeline that is unprotected steel		0.007%
IF-GU-540a.3	Percentage of gas transmission pipelines inspected	Percentage (%) by length	Strength Test: 93% (6,123 miles) In-Line Inspections: 36% (2,357 miles) Direct Assessment: • External Corrosion Direct Assessment: 13% (861 miles) • Internal Corrosion Direct Assessment: 5.7% (372 miles) • Stress Corrosion Cracking Direct Assessment: 0.2% (12 miles) Other: <1% • Direct Examination • Low Stress Re-assessment
	Percentage of gas distribution pipelines inspected (distribution leak survey)		28.6%
IF-GU-540a.4	Description of efforts to manage the integrity of gas delivery infrastructure, including risks related to safety and emissions	N/A	Gas Operations

SASB Code	Accounting Metric	Unit of Measure	PG&E Response
Activity metrics			
IF-GU-000.A	Number of residential customers served	Number	4,303,791
	Number of commercial customers served		230,481
	Number of industrial customers served		1,165
IF-GU-000.B	Amount of natural gas delivered to residential customers	Million British Thermal Units (MMBtu)	190,020,825
	Amount of natural gas delivered to commercial customers		89,705,685
	Amount of natural gas delivered to industrial customers		529,528,495
	Amount of natural gas transferred to a third party		88,570,170
IF-GU-000.C	Length of gas transmission pipelines	Kilometers (km)	10,622
	Length of gas distribution pipelines		69,202

Forward-Looking Statements

This Corporate Responsibility and Sustainability Report contains forward-looking statements regarding our plans, expectations, objectives and forecasts that are based on assumptions and information currently available to management.

These plans, expectations, objectives and forecasts, and the underlying assumptions on which they are based, are necessarily subject to various risks and uncertainties, the realization or resolution of which may be outside of management's control. Actual results could differ materially from those expressed or implied in the forward-looking statements. For a discussion of some of the factors that could cause actual results to differ materially, please see our reports filed with the Securities and Exchange Commission (SEC), including our Annual Report on Form 10-K for the year ended December 31, 2019 (the "2019 Annual Report"), and our subsequent reports filed with the SEC.