



Together, Building a Better California

Corporate Responsibility and Sustainability Report 2016



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

Message from the Chairman and CEO

To Our Stakeholders:

For PG&E, sustainability starts with providing energy that is safe, reliable, affordable and clean to millions of Californians. As we fulfill our core mission, we also confront daily decisions that affect the environment, the communities we serve and society in general. With that combination comes responsibility—not just to act in sustainable ways, but to orient our business toward creating a sustainable world where all of our customers can prosper and thrive.

PG&E's role in the energy economy, and the scale at which we work, means that we have a unique ability to take on big challenges—including the problem of climate change. Already, we are seeing the impact on our state from severe weather, wildfires and drought. These consequences affect businesses big and small, urban centers and rural communities, the most fortunate and the most vulnerable in society.

We know that finding the right solutions will require collaboration and partnership with others. It requires innovation. It requires sustained and smart investments. And it requires that we act at the local, state, national and international level.

That was the consensus at the COP21 climate talks in Paris last year, when more than 190 countries came together to commit to significant greenhouse gas reductions in the coming years. PG&E was proud to be a part of California's delegation to Paris, where we told the story of how companies like ours are joining with policymakers to slow climate change and begin building climate resilience, and do so with unprecedented success.

In the lead up to Paris, PG&E submitted our climate pledge, in which we committed to further deploy and integrate low-carbon, clean energy technologies and invest nearly \$3 billion a year through 2020 to modernize the grid. This will both make the grid more resilient and facilitate PG&E's vision of the Grid of Things™—an intelligent grid that will incorporate rising levels of distributed energy resources such as private solar, electric vehicles, battery storage and more.

We also pledged to increase use of our cutting-edge mobile gas leak detection system to find more natural gas leaks and fix them more quickly, both enhancing public safety and reducing the amount of methane released to the atmosphere.

Finally, we committed to continue collaborating with our many stakeholders to ensure all customers benefit from the distributed energy technologies becoming available today.

The point on collaboration is key. At PG&E, we recognize that sustainability involves more than addressing clean air and climate change. PG&E has expanded our definition of sustainability in recent years to include a complex array of interconnected issues ranging from public and employee safety to access to higher education, successful local businesses and thriving, resilient communities.

This report chronicles our progress in these areas and many more, which collectively comprise the sustainability journey that PG&E continues today.

We recognize that no company has all the solutions, that no one holds a patent on good ideas in safety or any other area, and that a diversity of perspectives will only help to broaden and better the discussion. Our approach to everything we do is to continue learning, from each other and the best companies around the world.

That's why we established our Sustainability Advisory Council, a panel of experts and experienced leaders from across academia, community organizations, policymakers and environmental groups. Convened for the first time earlier this year, the council will help us think and act with the bigger picture in mind.

We partner regularly with the innovators of nearby Silicon Valley and across the country, working to integrate new technologies so that all customers can benefit from these advances in an equitable way.

As distributed energy alternatives gain momentum, bringing these technologies together with other solutions—such as those enabling grid automation, the integration of variable sources of renewable power and the processing of a vast amount of information—will require a central player, one with a big reach and the ability to test, pilot and scale solutions safely and affordably, and in a way that preserves grid reliability and stability.

PG&E stands ready to help drive this transformation toward a low-carbon economy and combat climate change. We do so mindful that the biggest challenges require even bigger solutions, and that those only come when we're working together, to build a better California, nation and world.

In that spirit, PG&E and our over 23,000 employees welcome your feedback on this report and our performance, and we thank you for your ongoing engagement in making sustainability a mainstay of our business.

Sincerely,

A handwritten signature in black ink, reading "Anthony S. Earley Jr." in a cursive script.

Tony Earley
Chairman, CEO and President
PG&E Corporation



Sustainability

For PG&E, sustainability is about 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 with a mission rooted in public service, we embrace our role as a pioneer in the transition to a clean energy future and low-carbon economy. More than ever, we are also a committed partner in the local communities we are privileged to serve—focused on enabling economic vitality, sustainable growth and the overall well-being of our customers.

Bound together by our steadfast focus on safety, excellence in our operations and leadership on the environment, we are working together to build a better, more sustainable California.



Our Approach

As an energy provider for millions of Californians, we face choices every day with environmental, social and economic dimensions. The decisions we make can have a profound impact. For PG&E, sustainability means striking the right balance in those decisions so that we achieve our goals of providing safe, reliable, affordable and clean energy—today and into the future.

Our integrated approach to sustainability is guided by five overarching business goals: public and employee safety, delighting customers, engaging employees, rewarding shareholders and leading on the environment. Our ultimate measure of success is being a company that our customers trust, like and want to do business with and that can serve as a model for others in our industry and beyond.

Governance

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. Other 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, such as public and employee safety, operational excellence and investments to increase our deliveries of clean energy and enable a low-carbon future.

Within management, PG&E's Chief Sustainability Officer is responsible for leading PG&E's corporate sustainability initiatives, reporting and engagement. This is done in coordination with other members of senior management responsible for functions such as supply chain management, environmental compliance and customer energy solutions.

Employee-led initiatives throughout the business are also helping to integrate corporate sustainability priorities into our work. For example, our volunteer Grassroots Green Network actively engages employees to help reduce facility energy use, water use and waste, while our Employee Resource Groups (ERGs) provide an important link to diverse communities through volunteer service, mentoring and scholarship awards.

Strategy and Integration

PG&E’s sustainability commitment is well-aligned with—and mutually supported by—a number of California regulatory and public policy priorities. From support for energy efficiency and supplier diversity to a wide range of environmental measures, such as greenhouse gas reduction targets, California and its utilities work together to advance a broad sustainability agenda.

Within PG&E, we continue to integrate sustainability into our multiyear strategic planning process. We use a rigorous integrated planning process designed to identify compliance obligations and key risks; formulate clear multiyear goals and strategies; align resources; and ensure integration, consistency and continuity in our plans. The process focuses first on our risks, which leads to a long-term strategy to mitigate these risks and identify our critical objectives, and then matches our strategies with resource planning.

Collaborating with—and listening to—external stakeholders is crucial to this process. That is why PG&E established an external Sustainability Advisory Council to help guide our sustainability strategy and offer input and recommendations to PG&E as the company seeks to combat climate change and advance its clean energy, environmental stewardship, economic development and community vitality initiatives. The Council is comprised of leaders recognized nationally for their expertise on issues material to the long-term sustainability of our business.

Our materiality assessment, published in 2014, also continues to inform our sustainability strategy and broader enterprise-wide strategic planning process.

Creating Incentives

PG&E’s Short-Term Incentive Plan (STIP) reinforces PG&E’s sustainability commitment by rewarding eligible employees for achieving specific goals that are crucial to our success. In 2015, we continued to tie compensation closely to safety, with public and workforce safety measures determining 50 percent of management’s annual at-risk performance-based cash compensation. Financial performance and customer service each represented an additional 25 percent.

For more details on the specific measures and targets for our 2015 and 2016 STIP, as well as our 2015 results, please see page 49 of the 2016 PG&E Corporation and Pacific Gas and Electric Company Joint Proxy Statement.

SHORT-TERM INCENTIVE PLAN – PERFORMANCE MEASURES	
Measure	2015 Weight
Safety ¹	50%
Customer ²	25%
Financial ³	25%

1. Based on four subcomponents: nuclear operations safety, electric operations safety, gas operations safety and employee safety.

2. Based on two subcomponents: customer satisfaction and average duration of electricity outages.

3. Based on PG&E Corporation’s earnings from operations.

Measuring and Communicating Our Progress

Holding ourselves accountable and reporting on our performance with transparency is essential and has been a hallmark of our approach since we began producing a formal corporate environmental report in the 1990s.

In this report, we share our progress on the Key Sustainability Indicators for which we set annual targets. We also share data on our performance across a wide range of environmental, social and economic measures. By reporting on a broad set of metrics and issues, the report shows where we are doing well, as well as where we have opportunities to strengthen our performance.



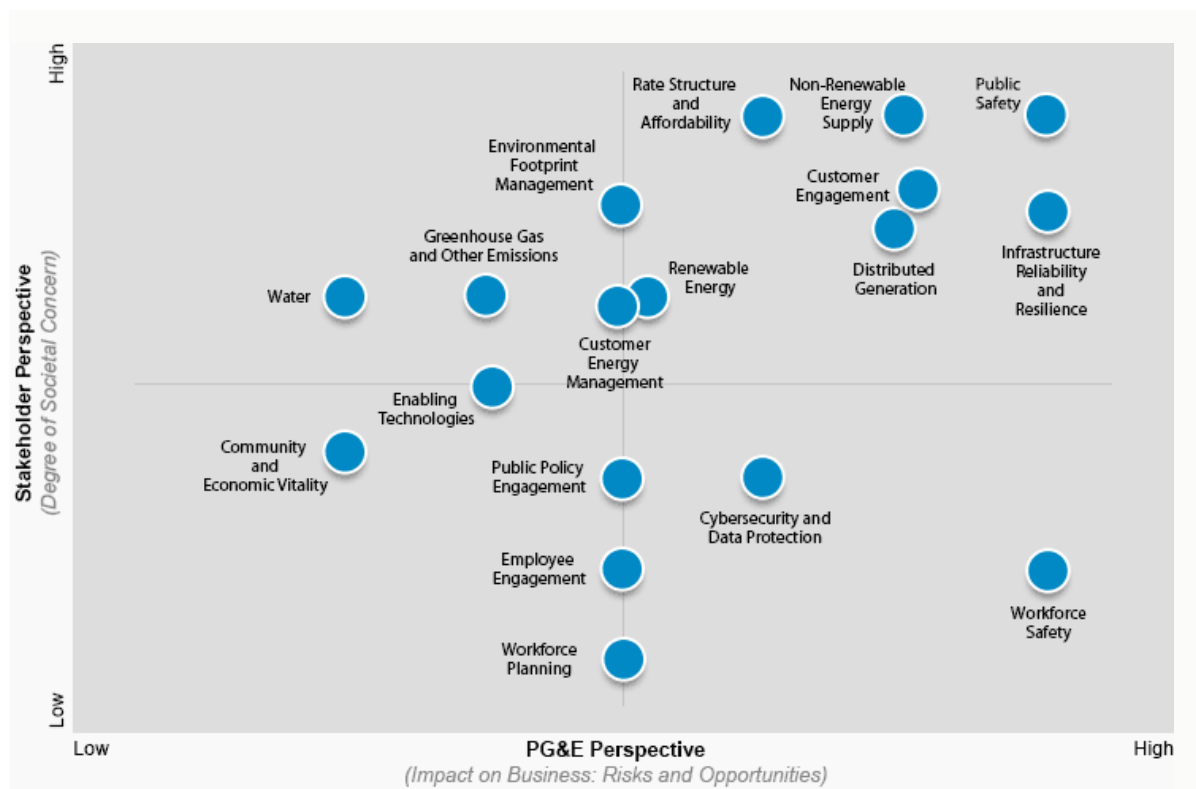
Materiality

PG&E published its first materiality assessment for corporate sustainability in 2014—a strategic project to help us identify topics that are material to the long-term sustainability of our business. Conducted in coordination with PG&E's strategic planning process, the materiality assessment engaged our stakeholders, identified opportunities and risks, and sharpened our corporate sustainability strategy and reporting.

While we continue to engage our stakeholders on these issues, we recognize that PG&E's materiality matrix captured a snapshot in time. Because our operating climate continues to evolve, we are assessing options for refreshing the assessment.

PG&E's Materiality Matrix

PG&E's materiality assessment identified 18 issues. Every issue is material to PG&E's long-term sustainability, regardless of its placement on the matrix.



For more information on how our materiality matrix was developed, please see our 2014 Corporate Responsibility and Sustainability Report.

What We Learned

Our materiality assessment provided important, actionable insights into our stakeholders' priorities and our own business risks and opportunities. We continue to integrate these insights into our work. For example, we structured this report to highlight our strategy and performance on the issues deemed most material in the assessment.

Key insights of the materiality assessment included:

- **Reinforced our focus on the basics of our business.** The assessment showed that safety, reliability, affordability and customer engagement are top priorities both for PG&E and our external stakeholders—and continue to be “foundational” issues.
- **Showed interconnections among issues.** For example, the assessment illustrated that enabling technologies—such as those related to the smart grid, energy storage, electric vehicles and customer energy usage data—present many opportunities for PG&E and are connected to issues ranging from customer engagement to renewable energy. This interconnectivity continues to provide insight into how we might approach issues in a more integrated way.

Defining a “Material” Issue

A material corporate sustainability issue is one that has the potential to impact PG&E's long-term sustainability, based on the perspectives of internal and external stakeholders. This is different from, but related to, financial materiality, which is a threshold for influencing the economic decisions of investors. Material corporate sustainability issues are not limited to issues that could have a significant financial impact on the organization.

- **Highlighted the importance of emerging issues.** The assessment identified a number of emerging issues, including infrastructure resilience and adapting to the effects of climate change. PG&E continues to make progress in understanding and addressing this issue with our stakeholders.

For example, in 2016, we participated in a climate change resilience workshop hosted by the California Energy Commission and published our first Climate Change Vulnerability Assessment, which examines PG&E's exposure to the forces of climate change, including flooding during severe storms, sea level rise, land subsidence, heat waves, changes in precipitation patterns, and wildfire danger.

- **Underscored the importance of water and drought response.** In our assessment, water's importance to PG&E was notable in its interconnections to other material issues, such as the reliability of our energy supply, including our extensive hydroelectric system, as California faces persistent drought conditions.

Our partnership with the University of California, Berkeley, and the Department of Water Resources to study the soil moisture, snowpack and other elements in the Feather River basin serves as an example of our work to better understand emerging climate impacts and how they may affect PG&E's hydroelectric system, our customers and wildlife.



Engaging Stakeholders

To meet PG&E's fundamental role as an energy company—delivering safe, reliable, affordable and clean energy to customers—we actively engage with a wide range of stakeholders. By collaborating with customers, communities, employees, suppliers, investors and outside experts, we are better able to understand their needs, keep them informed of our progress and work toward mutually beneficial outcomes.

Our Approach

PG&E's Chief Sustainability Officer convened a Sustainability Advisory Council, which includes community and environmental leaders, policy experts and business entrepreneurs. The nine-person group engages regularly with PG&E leaders to identify new areas of opportunity, inspire collaboration with new partners and help elevate issues within and outside PG&E.

With a great diversity of stakeholders, PG&E is also focused on localizing our presence and strategies in the communities we serve. This includes formally empowering our teams to work more effectively together at the local level and better incorporating local needs and concerns into our operating decisions. We have built local cross-functional leadership teams that meet regularly to address local issues. The teams are led by local managers and include representatives from across the business.

Throughout the year, PG&E also convenes a Community Advisory Council comprised of leaders representing the diverse constituencies we serve, including local businesses, workforce development groups and community organizations. The Council



PG&E convenes national panel of advisers to guide focus on sustainability

PG&E's commitment to sustainability took a big step forward when we convened our first meeting with a newly formed advisory council on sustainability. Company leaders and council members focused on the need for PG&E to further its sustainability work by creating a unified approach that firmly grounds corporate strategy in the concerns, aspirations and capabilities of the communities that make up its service area.

The Council, which will convene twice a year, identified a number of high-level opportunities, including:

- Preparing California's next-generation workforce and leaders in the energy industry by collaborating with schools to develop students who are growing up in a culture that values sustainability
- Focusing on reducing emissions—not just to meet greenhouse gas-reduction goals but also to improve public health, particularly in underserved communities
- Highlighting the urgency of decarbonizing transportation and encouraging purchases of zero-emission and alternative fuel vehicles
- Cultivating new partners in Silicon Valley and other centers of innovation to help lead change

provides a forum for these stakeholders to share feedback and engage in an ongoing dialogue with PG&E about issues of importance to them and the communities they represent.

We also convene a Communities of Color Advisory Group focused on diversity outreach and engagement, led by PG&E's low-income program team in our customer organization.

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

CUSTOMERS	HOW WE ENGAGE
<ul style="list-style-type: none"> 5.3 million electric accounts 4.4 million natural gas accounts 	<ul style="list-style-type: none"> Local cross-functional leadership teams that meet regularly to address local issues Channel of choice for communication: text, email or phone Customer satisfaction surveys, focus groups and other research Online energy management and bill pay options Self-service capabilities like reconnecting service via Interactive Voice Response technology Social media platforms Communications in multiple languages and formats Communities of Color Advisory Group focused on diversity outreach and engagement Open houses on key projects Customer account and service representatives Customer call centers and local offices

COMMUNITIES	HOW WE ENGAGE
<ul style="list-style-type: none"> Emergency first responders Community organizations Environmental organizations Economic development organizations 	<ul style="list-style-type: none"> Local public safety teams Workshops, training and practice drills with local emergency agencies and first responders Community Advisory Council with leaders representing diverse constituencies we serve Participation in coalitions and networks, such as Ceres, California Environmental Dialogue and the Silicon Valley Leadership Group Active participation of officers and other employees on nonprofit boards Employee volunteers Meetings, conferences and community events Support for local programs through community investments

EMPLOYEES	HOW WE ENGAGE
<ul style="list-style-type: none"> ■ Current employees ■ Prospective employees ■ Retirees ■ Labor unions 	<ul style="list-style-type: none"> ■ Biennial employee engagement survey ■ Employee Resource Groups ■ Awards recognizing employee leadership on safety, diversity, volunteering, innovation and the environment ■ Mentoring program ■ Health and wellness: 24/7 nurse hotline, Employee Assistance Program and Peer Volunteer Network ■ Workforce recruiting and training programs ■ Employee and retiree newsletters ■ 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	HOW WE ENGAGE
<p>As of December 31, 2015:</p> <ul style="list-style-type: none"> ■ Approximately 80 percent of PG&E Corporation shares were held by institutional investors ■ The top 10 institutional investors owned approximately 41 percent of our stock 	<ul style="list-style-type: none"> ■ Quarterly earnings calls and news releases ■ One-on-one meetings and industry conferences ■ Required disclosures ■ Discussions with institutional investors regarding corporate governance ■ Investor relations communications (as-necessary and scheduled correspondence) ■ Engagement with socially responsible investors

SUPPLIERS	HOW WE ENGAGE
<ul style="list-style-type: none"> ■ Diverse suppliers (women-, minority-, service-disabled-veteran and LGBT-owned businesses) ■ Local suppliers ■ Small suppliers ■ Non-diverse prime suppliers 	<ul style="list-style-type: none"> ■ Supplier Diversity Program with specific spending targets ■ Workshops and capacity-building training that support safe, cyber-secure, green and thriving diverse suppliers ■ Technical assistance and training programs for suppliers, many in conjunction with community organizations ■ Annual Responsible Supplier of the Year Awards ■ Supplier Sustainability Program ■ Engagement with the Electric Utility Industry Sustainable Supply Chain Alliance and the California Utilities Diversity Council ■ Facilitating supplier mentoring relationships ■ Engagement with local and national diverse business organizations

Key Sustainability Indicators

In our Corporate Responsibility and Sustainability Report, we share our progress on a set of Key Sustainability Indicators for which we set annual targets. We also share data on our performance across additional environmental, social and economic measures.

Business

Business		target met or exceeded target not met		
Metric	2015 Target	2015 Result	Meets Target	2016 Target
GAS OPERATIONS				
Strength-Tested Transmission Pipeline (miles)	74	79	✓	80
Transmission Pipeline Replacement (miles)	11	19	✓	8
Valves Automated (valves)	27	27	✓	26
Retrofitted Transmission Pipeline (miles)	55	72	✓	111
Gas Dig-Ins ¹ (dig-ins per 1,000 Underground Service Alert tickets)	2.06	2.11	—	2.03
ELECTRIC OPERATIONS				
System Average Interruption Frequency Index (SAIFI) average number of outages per customer	0.957	0.871	✓	0.892
System Average Interruption Duration Index (SAIDI) average duration of outages per customer in minutes	106.6	96.0	✓	96.3
Customer Average Interruption Duration Index (CAIDI) average restoration time per outage in minutes	111.4	110.2	✓	108.0
NUCLEAR OPERATIONS				
Unit 1 Performance Indicator ²	94.20	99.44	✓	98.70
Unit 2 Performance Indicator ²	94.20	99.83	✓	98.70
COMPLIANCE AND RISK MANAGEMENT				
Employees Completing Annual Compliance and Ethics Training	99.8%	99.9%	✓	99.9%
Management Employees Completing Annual Code of Conduct Training	99.8%	99.8%	✓	99.8%

1. Total number of third-party dig-ins—damage from a third party resulting in repair or replacement of an underground facility. Definition of exclusions slightly adjusted in 2016 to align with benchmarks.

2. Refers to 12 performance indicators for nuclear power generation reported to the Institute of Nuclear Power Operations and compared to industry benchmarks.

Safety

Safety

		target met or exceeded target not met	✓ —	
Metric	2015 Target	2015 Result	Meets Target	2016 Target
PUBLIC SAFETY				
Leak Repair Performance ¹ (number at year-end)	100 or fewer	94	✓	100 or fewer
Gas Emergency Response ² (minutes)	21.00	20.33	✓	21.00
Transmission & Distribution Wires Down ³ (number of instances)	2,540	2,572	—	2,572
Electric Emergency Response ⁴ (percentage within 60 minutes)	95.0%	97.1%	✓	97.5%
WORKPLACE SAFETY				
Lost Workday Case Rate ⁵	0.330	0.372	—	0.320
Serious Preventable Motor Vehicle Incident Rate ⁶	0.239	0.266	—	0.239
Timely Reporting of Injuries ⁷	N/A	N/A	N/A	67.1%

1. Number of grade 2 and 2+ leaks open at year-end. Grade 2 and 2+ leaks are minor and non-hazardous.

2. Average response time that a Gas Service Representative or a qualified first responder takes to respond to the site of an immediate response gas emergency order.

3. Number of instances where an electric transmission or primary distribution conductor is broken and falls from its intended position to rest on the ground or a foreign object (e.g., trees, vehicles, fences or other structures).

4. Percentage of time PG&E personnel are on-site within 60 minutes after receiving a 911 electric-related call, with on-site defined as arriving at the premises where the 911 agency personnel are standing by.

5. Number of Lost Workday cases incurred per 200,000 hours worked. A Lost Workday case is a current year OSHA Recordable incident that has resulted in at least one lost workday.

6. Measures only those incidents considered to be serious, rather than all incidents that were otherwise preventable.

7. New measure for 2016. Measures percentage of work-related injuries reported to PG&E's 24/7 Nurse Report Line within one day of the incident.

Customers and Communities

Customers and Communities		target met or exceeded target not met		√ —
Metric	2015 Target	2015 Result	Meets Target	2016 Target
CUSTOMER SATISFACTION				
Customer Satisfaction Score ¹	77.2	75.5	—	75.7
Gas and Electric Meter Billing Accuracy ² (percentage of bills)	99.75%	99.80%	√	99.73%
ENERGY AFFORDABILITY				
Energy Savings Assistance Program (number of homes weatherized)	100,000	100,573	√	100,000
California Alternative Rates for Energy (number of eligible customers enrolled)	1,390,000	1,423,989	√	1,419,000
CUSTOMER ENERGY EFFICIENCY ³				
Electricity Saved (GWh)	980	1,392	√	1,236
Natural Gas Saved (million therms)	15.4	23.4	√	18.4
Generation Capacity Avoided (MW)	154	295	√	226
COMMUNITY INVESTMENTS				
Charitable Contributions (percentage of pre-tax earnings from operations)	1.1%	1.3%	√	1.1%
SUPPLIER DIVERSITY				
Spending on Certified Diverse Suppliers (percentage)	41.0%	44.0%	√	42.0%

1. Overall satisfaction of customers with the products and services offered by PG&E, as measured through a quarterly survey. Each year, we calibrate our customer satisfaction performance using results from J.D. Power's Utility Customer Satisfaction Studies. This comparison helps us set our goal each year, as we aim to achieve second-quartile performance in customer satisfaction.

2. 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).

3. Data refers to annual energy savings or the first-year impacts associated with installed customer energy efficiency projects. Targets are based on mandated energy efficiency savings as agreed upon with the California Public Utilities Commission.

Employees

Employees

Metric	2015 Target	2015 Result	Meets Target	2016 Target
EMPLOYEE ENGAGEMENT				
Employee Engagement Index ^{1, 2}	N/A	N/A	N/A	76
Employee Volunteer Hours	79,000	87,000	✓	90,000
Employee Giving Campaign Pledges/Donations (\$ million)	\$7.7	\$7.9	✓	\$7.9
CAREER PATHWAYS				
Training Effectiveness ³	4.31	4.44	✓	4.45
PowerPathway™ graduates hired into industry jobs (percentage)	82%	90%	✓	82%
HEALTH AND WELLNESS				
Workforce Unavailable Due to Health ⁴	7.5%	7.4%	✓	7.2%

1. Percentage of favorable responses to questions on employee survey that measure employee engagement.

2. There is no 2015 target or result because PG&E's employee survey is fielded every two years, a best practice among companies, to allow more time to execute on action plans to address issues identified in the survey.

3. Measures the effectiveness of PG&E's internal training program on a 5-point scale through client surveys on predictive data from employees on their ability to use training on the job.

4. Percentage of full-time employees unavailable for work either due to long-term or short-term health reasons.

Environment

Environment

		target met or exceeded target not met	√ —	
Metric	2015 Target	2015 Result	Meets Target	2016 Target
COMPLIANCE				
Agency Inspections Without a Written Enforcement Action	90%	91%	√	90%
BUILDINGS AND OPERATIONS				
Additional Energy Use Reduction ¹	2.5%	1.9%	—	2.0%
Additional Water Use Reduction ²	4.5%	7.8%	√	3.5%
Waste Diversion Rate ³	80%	79%	—	80%
NATURAL RESOURCE STEWARDSHIP				
“Bird-Safe” Utility Pole Retrofits	2,000	2,161	√	2,000
CLEAN ENERGY				
Renewable Portfolio Standard (average percentage of renewable energy delivered to customers, 2014 to 2016)	23%	29.5%	√	Average of 23% over 2014 to 2016 period
SUPPLIER SUSTAINABILITY				
Supplier Environmental Performance Standards ⁴	65%	74%	√	70%

1. Energy use is measured in MMBtus, and the 167 sites include offices and service yards. In 2016, PG&E changed its methodology to measure energy use reduction on a square-foot basis.

2. Water use is measured in gallons, and the 132 sites include offices and service yards. In 2016, PG&E changed its methodology to measure water use reduction on a square-foot basis.

3. The waste metric measures the diversion rate in the final quarter of each year and includes all non-hazardous municipal waste at 115 office facilities and service yards.

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, using supplier responses to an annual survey conducted by the Electric Utility Industry Sustainable Supply Chain Alliance.



Recognition

In 2015, PG&E was honored to be recognized for our commitment to excellence in three major areas: corporate sustainability and environmental leadership; diversity and inclusion; and innovation, operations and community engagement.

Corporate Sustainability and Environmental Leadership

- **S&P Climate Disclosure Leadership Index**—A perfect score of 100 and one of only four U.S. utilities to make the index
- **Corporate Responsibility Magazine's 100 Best Corporate Citizens**—No. 2 among utilities and No. 58 overall
- **Energy Intelligence**—No. 23 on EI New Energy's Global Top 100 ranking
- **National Hydropower Association**—Outstanding Stewards of America's Waters Award
- **Newsweek Green Rankings**—No. 3 among electric and gas utilities and No. 42 overall
- **Solar Electric Power Association Utility Solar Rankings**—Top utility in the U.S. (Solar Megawatts)

Diversity and Inclusion

- **Black Enterprise magazine**—One of the top 40 best companies for diversity
- **Disability Equality Index**—A perfect score of 100 percent
- **DiversityBusiness.com**—One of the top 50 organizations for multicultural business opportunities
- **DiversityInc**—One of the top five utilities for diversity efforts
- **Electric Power Conference**—Faraday Award given to PG&E's PowerPathway program for employment of veterans
- **G.I. Jobs magazine**—Top 100 Military Friendly Employer®
- **Human Rights Campaign**—100 percent rating on the Corporate Equality Index
- **LATINA Style magazine**—One of the LATINA Style 50
- **Minority Business News magazine**—Named PG&E Chairman, CEO and President Tony Earley to "Best of the Decade" list and Director of Supply Chain Responsibility Joan Kerr to Circle of Honor
- **National Affinity Leadership Congress**—Above and Beyond Awards to Latino and Women Employee Resource Groups (ERG)
- **Project SEARCH**—Most Productive Program for internships for individuals with intellectual and developmental disabilities
- **U.S. Department of Defense**—For long-standing support of employees serving in the National Guard and Reserve
- **U.S. Hispanic Chamber of Commerce**—Million Dollar Club and Top Hispanic ERG

Innovation, Operations and Community Engagement

- **ARCOS**—Innovation Award for implementation of automated emergency response technology
- **Cal Poly Society of Hispanic Professional Engineers**—Company of the Year
- **CIO magazine**—CIO 100 Award
- **Edison Electric Institute**—Emergency Recovery Award
- **Napa Chamber of Commerce**—Large Business of the Year
- **San Francisco Chinese Chamber of Commerce**—President's Award

Employee Champions

In 2015, PG&E recognized a number of employees with our highest honors for their commitment to innovation, environmental leadership, diversity, community involvement and safety. PG&E gave several of the award recipients \$5,000 each to present to the nonprofit of their choice, while award finalists received \$1,000 each.

Shermer L. Sibley Safety and Health Award

This award recognizes PG&E organizations for their outstanding contributions toward public and workplace safety and was given to the:

- **Gas Process Safety** team for successfully deploying a world-class process safety management system to focus resources on the most significant hazards.
- **Humboldt Bay Power Plant** team for working for more than 900 days without a single work-related incident requiring medical treatment beyond first aid while decommissioning the nuclear power plant.

Richard A. Clarke Environmental Leadership Award

This award honors PG&E individuals and teams who demonstrate stewardship of the environment and was awarded to:

- **Corporate Real Estate Strategy and Services Project Delivery and Facility Management** for exceeding the five-year goals for energy, water and waste reduction and embedding environmentally-preferable practices into the real estate life cycle.
- The **Helm Substation Burrowing Owl Conservation** team, which devised a strategy to complete capital improvements while minimizing disturbance of the protected burrowing owls that make a home along the fence surrounding the substation.
- **The Electric Transmission Vegetation Management Right-of-Way Stewardship Accreditation** team, which came together to seek industry-leading, nationally recognized validation of PG&E's right-of-way stewardship activities.

Margaret Mooney Award for Innovation

This award acknowledges individuals or teams who demonstrate innovation and was awarded to the:

- **Data Visualization—Google Earth SAP** team, which created a new technology that provides work crews with a dramatically enhanced data visualization of work in progress.
- **Helms Rotor Replacement Project** team for taking on the task of repairing, then replacing, million-pound rotors when purchasing factory replacements was not an option.
- **Generator Power Package** team for creating the first-of-its-kind "primary voltage generation package" to provide power during planned outages and emergency work.

John A. Britton Award

This award, which recognizes individuals who, through quick action, courage and selflessness, saved the life of a colleague or community member, was awarded to:

- **Matt Bateman, Donnie Davis, Sal Escamilla, Dan Gorman, Jim McDonald and Brandon McLean**, who leapt into action to extinguish a fire in an apartment building, call the fire department and alert residents, preventing serious injury and greater property damage.
- **Kurt Kidwell**, who saved the life of a choking baby by performing a finger sweep of her mouth and applying pressure to her back to clear her airway.
- **Richard Bush, Jr.**, who saved the life of an unconscious man by performing CPR with his brother until emergency responders arrived.
- **Laird Oelrichs**, who saved the life of a heart attack victim at the finish line of a half-marathon by performing CPR until emergency responders arrived.
- **Alex Farrington**, who saved the life of a motorcycle accident victim by providing first aid until emergency responders arrived.
- **Ben Sanderson**, who prevented injuries by using his PG&E vehicle to block the scene of a crash between a large truck and a PG&E power pole until emergency responders arrived.

Frederick W. Mielke, Jr. Award for Outstanding Community Service

This award distinguishes PG&E employees who demonstrate outstanding community service and was awarded to:

- **Jeff Gomes**, who has volunteered with the Orland Fire Department for 24 years, making all emergency calls and training all new volunteer firefighters.
- **Mark Rasmussen**, who has directed a team of PG&E volunteers for the past 26 years to decorate a tree at the Hospice of San Joaquin in Stockton with LED light cable and garland during the holidays.
- **Cynthia Haynes**, who has chaired the Auburn Veterans Day Parade for nine years and encouraged students to get involved.

Presidents' Diversity Champion Award

This award recognizes employees who have worked to help promote a diverse and inclusive culture and was awarded to:

- **Julia Huang**, an inaugural board member of PG&E's Veterans ERG, who has established partnerships between veterans and the PowerPathway program, created a recruiting position that works exclusively with veterans and formalized the Buddy Program to mentor veterans.
- **Dela Weeks**, who serves as president of PG&E's Black ERG and is renowned for coordinating large-scale volunteer efforts and working with younger leaders to develop leadership and communication skills.
- **Jeannette Lindemann**, a field ambassador of the Women's Network, who has created mentoring and networking opportunities in the Walnut Creek and Concord areas and spearheaded a new chapter in San Ramon.



Business

At PG&E, our promise of providing safe, reliable, affordable and clean energy to nearly 16 million customers means that we are continually investing in our energy infrastructure. As we add more clean and renewable power to our energy mix, we're also modernizing our operations, strengthening our gas and electric systems, and building a smarter, safer and more resilient grid to meet our customers' energy needs, as well as contribute to a more sustainable future for California.

Key Sustainability Indicators

Number of valves automated in 2015, bringing the total to 235 valves that enable remote-control shutoff of gas in an emergency:

27 valves

Average number of power interruptions per customer, the fewest in PG&E's history:

0.871 interruptions

Highlights

Convened an external Sustainability Advisory Council to guide our sustainability efforts.

Created new governance bodies to help build a best-in-class ethics and compliance program under the leadership of our Chief Ethics and Compliance Officer.

Invested more than \$5 billion to enhance our infrastructure and improve safety and reliability.

Completed substantial work across our natural gas system, including deploying new, innovative technologies to find and fix gas leaks faster than ever before.

Delivered record electric reliability for the seventh straight year, with the average customer experiencing less than one outage during the year.

Announced a joint proposal with labor and leading environmental organizations that would increase investment in energy efficiency, renewables and storage while phasing out PG&E's production of nuclear power in California by 2025.

Made continued investments in solar, wind and other renewable energy resources—delivering an electric power mix comprised of nearly 30 percent eligible renewable energy under California's Renewable Portfolio Standard.

Continued to plan for a future grid that can integrate even more solar and renewable energy, electric vehicles and batteries distributed across the system.

Maintained the nation's largest investor-owned hydroelectric system—with a focus on working collaboratively to manage these resources during California's drought.

Supported public policies that promote clean energy, workforce development, grid innovation and infrastructure investment within California and the nation.

PG&E Overview

Pacific Gas and Electric Company, a subsidiary of PG&E Corporation, is one of the largest combined natural gas and electric utilities in the United States. Based in San Francisco, the company delivers some of the nation's cleanest energy to nearly 16 million people in Northern and Central California. PG&E Corporation had more than \$60 billion in assets as of December 31, 2015, and generated revenues of nearly \$17 billion in 2015.

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

Customer Accounts (as of December 31, 2015)

5.3 million electric distribution accounts

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

4.4 million natural gas distribution accounts

- 4.2 million residential
- 0.2 million commercial and industrial

Employees (as of December 31, 2015)

Approximately 23,000 regular employees

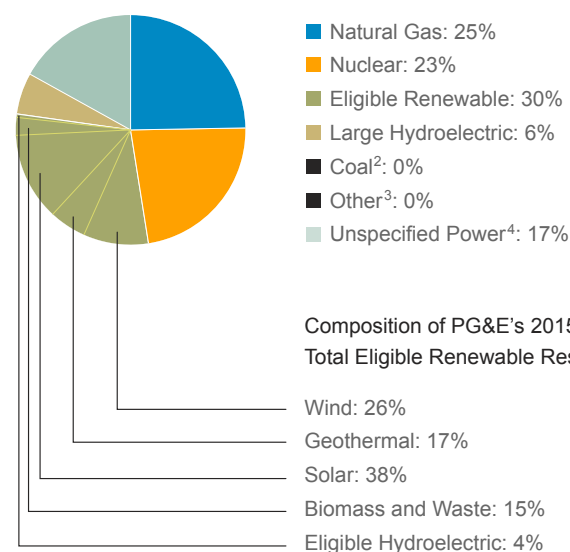
Approximately 13,500 employees are covered by collective bargaining agreements with three labor unions:

- 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

- 7,691 MW of owned hydroelectric, nuclear, natural gas, solar and fuel cell generation
- Approximately 142,000 circuit miles of electric distribution lines and approximately 18,400 circuit miles of electric transmission lines
- Approximately 42,800 miles of gas distribution pipelines, 6,700 miles of backbone and local gas transmission pipelines, and various gas storage facilities

PG&E's 2015 Electric Power Mix Delivered to Retail Customers¹



1. Due to rounding conventions, some data above sum to an amount greater or less than the totals provided.

2. Refers to PG&E's owned generation resources and electricity generated under contracts with third parties.

3. Includes diesel oil and petroleum coke (a waste byproduct of oil refining).

4. Refers to electricity generated that is not traceable to specific generation sources by any auditable contract trail.

5. As defined in Senate Bill 1078, which created California's Renewable Portfolio Standard, an eligible renewable resource includes geothermal facilities, hydroelectric facilities with a capacity rating of 30 MW or less, biomass, selected municipal solid waste facilities, solar facilities and wind facilities. These figures are preliminary and will not be finalized until verified by the California Energy Commission.

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	3,896
Solar Photovoltaic Facilities	152
Total	7,691

1. As of December 31, 2015.

2. Natural gas power plant.

3. Nuclear power plant.

GENERAL UTILITY PRODUCTION STATISTICS

	2013	2014	2015
Total Electricity Generated (GWh net)¹	31,547	28,929	30,719
<i>Fossil Fuel-Fired Plants (GWh net)</i>	<i>6,109</i>	<i>6,096</i>	<i>7,307</i>
Colusa Generating Station (GWh net)	2,536	2,485	3,572
Gateway Generating Station (GWh net)	3,182	3,242	3,315
Humboldt Bay Generating Station (GWh net)	373	350	406
Fuel Cell Facilities (GWh net)	18	20	14
<i>Other Plants (GWh net)</i>			
Diablo Canyon Power Plant (GWh net)	18,041	17,039	18,525
Hydroelectric Facilities (GWh net)	7,119	5,458	4,568
Solar Photovoltaic Facilities (GWh net)	279	337	319
Electricity Purchased (GWh)	49,837	51,679	48,559
Other Electric Supplies (GWh)²	177	0	0
Retail Electricity Sales (GWh)³	75,705	74,547	72,113

1. Net of electricity used to operate plants.

2. Represents energy purchased by the California Department of Water Resources (DWR) from various energy suppliers for the benefit of the Utility's customers.

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

NATURAL GAS THROUGHPUT

	2013	2014	2015
Total Natural Gas Throughput (million cubic feet or MMcf)¹	951,601	914,033	904,522

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

System Investments

\$5.4 billion in capital investments in 2015 to enhance PG&E's infrastructure and improve safety and reliability

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

	2013	2014	2015
Franchise Fees	\$144,073,069	\$152,081,941	\$156,127,382
Property Tax Payments	\$316,970,343	\$344,194,074	\$385,860,200

Financial Performance

The financial information below is derived from PG&E Corporation's Consolidated Financial Statements at December 31, 2014 and December 31, 2015, unless otherwise indicated, which include the accounts of PG&E Corporation, the Utility and other wholly owned and controlled subsidiaries.

FINANCIAL HIGHLIGHTS

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

	2014	2015
Operating Revenues	\$17,090	\$16,833
Income Available for Common Shareholders		
Earnings from operations ¹	1,648	1,519
Items impacting comparability ^{2, 3}	(212)	(645)
Reported Consolidated Income Available for Common Shareholders	1,436	874
Income Per Common Share, Diluted		
Earnings from operations ¹	3.50	3.12
Items impacting comparability ^{2, 3}	(0.45)	(1.33)
Reported Consolidated Net Earnings Per Common Share, Diluted	3.06	1.79
Dividends Declared Per Common Share	1.82	1.82
Total Assets at December 31,	\$60,127	\$63,339
Number of Common Shares Outstanding at December 31,	475,913,404	492,025,443

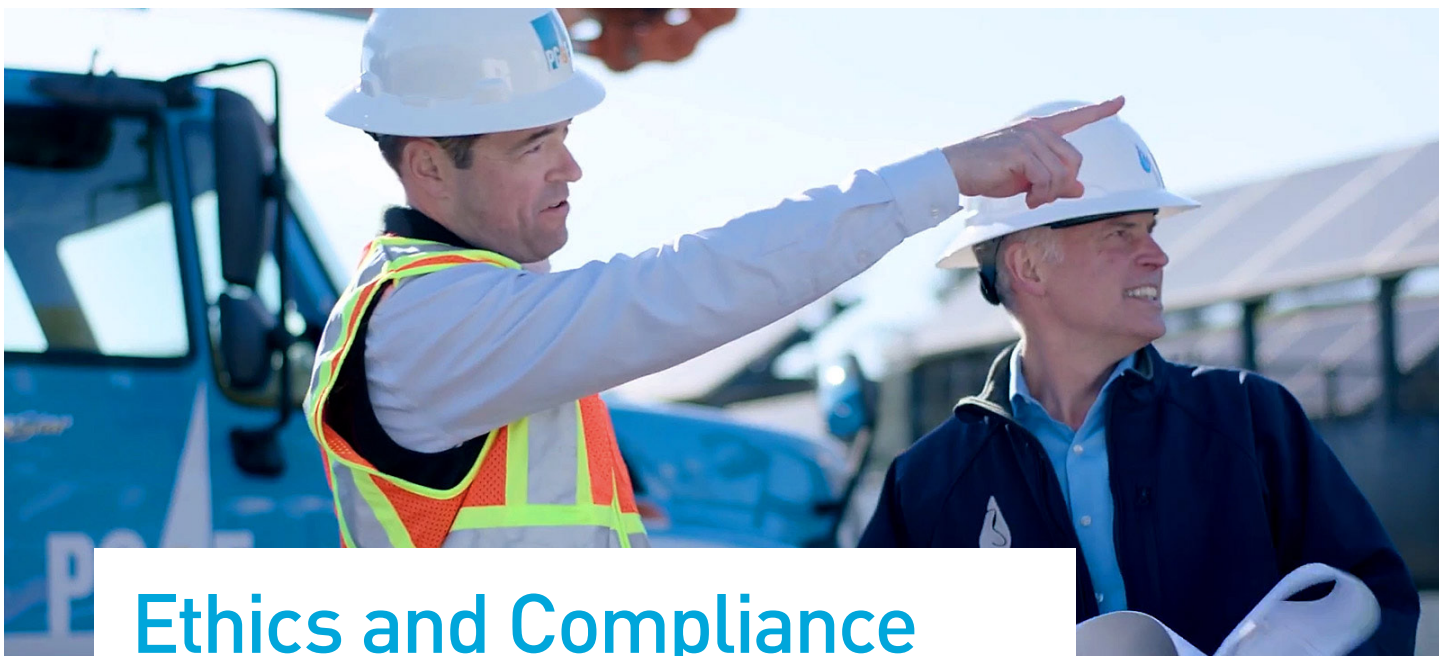
1. "Earnings from operations," a non-GAAP financial measure, is calculated as income available for common shareholders less items impacting comparability as described in Note 2 below. For more information about non-GAAP financial measures, see our reports filed with the Securities and Exchange Commission (SEC) and available on PG&E Corporation's website at: <http://investor.pgecorp.com>.

2. "Items impacting comparability" are those items that management believes do not reflect the normal course of operations and affect comparability of financial results between periods.

3. The Utility incurred costs of \$103 million, pre-tax, during the 12 months ended December 31, 2015 for pipeline-related expenses, including costs incurred to identify and remove encroachments from transmission pipeline rights of way and to perform remaining work under the Utility's pipeline safety enhancement plan ("PSEP"). The Utility incurred costs of \$58 million, pre-tax, during the 12 months ended December 31, 2015 for legal and regulatory-related expenses, including costs incurred in connection with various enforcement, regulatory, and litigation activities regarding natural gas matters and regulatory communications.

The Utility incurred costs of \$907 million, pre-tax, during the 12 months ended December 31, 2015 associated with fines and penalties imposed by the California Public Utilities Commission (CPUC) on April 9, 2015 in the gas transmission pipeline investigations. These costs include a \$100 million additional accrual for the fine paid to the State General Fund, a \$400 million charge for a bill credit for natural gas customers, and \$407 million in estimated charges for capital costs incurred during the 12 months ended December 31, 2015 that the Utility believes are probable of disallowance in the 2015 Gas Transmission & Storage (GT&S) rate case. On June 23, 2016, the CPUC approved a final decision in phase one of the Utility's 2015 GT&S rate case. The CPUC will determine the allocation of the \$850 million of shareholder funded safety work (imposed by the April 9, 2015 decision) in a second phase of the 2015 GT&S rate case. In the meantime, the Utility continues to record a charge for its best estimate of the current spending that is probable of disallowance, which will ultimately be determined in phase two of the 2015 GT&S rate case. For more information, see our quarterly report on Form 10-Q for the quarter ended June 30, 2016, filed with the SEC and available on PG&E Corporation's website at: <http://investor.pgecorp.com>. Future fines or penalties may be imposed in connection with other enforcement, regulatory and litigation activities regarding natural gas matters and regulatory communications. Costs included insurance recoveries of \$49 million, pre-tax, for third-party claims and associated legal costs related to the San Bruno accident that the Utility received during the 12 months ended December 31, 2015. The Utility has received a cumulative total of \$515 million through insurance related to \$558 million of third-party claims and \$92 million of legal costs incurred. No further insurance recoveries related to these claims and costs are expected. In 2014, natural gas matters included pipeline-related costs to perform work under the PSEP and other activities associated with safety improvements to the Utility's natural gas system, as well as legal and other costs related to natural gas matters. Natural gas matters also included charges related to fines, third-party liability claims, and insurance recoveries in 2014. In 2014, the Utility reduced its accrual related to the Hinkley whole house water replacement program.

For more information, see PG&E Corporation's and Pacific Gas and Electric Company's 2015 Joint Annual Report to Shareholders or Annual Report on Form 10-K for year ending December 31, 2015, which have been filed with the U.S. Securities and Exchange Commission.



Ethics and Compliance

At PG&E, we are committed to complying with both the letter and the spirit of the law and our own Code of Conduct at all times. We hold ourselves to these standards in all actions, both as a business and as individuals. Over the past two years, we have worked to strengthen our ethics and compliance program and performance even further. That includes a consistent focus on creating a culture where every employee is empowered to speak up to share new ideas and raise concerns—including those about safety and misconduct, as well as potential violations of laws and regulations or PG&E policies, standards and procedures.

Our Approach

Ethics and compliance at PG&E are managed on three levels:

Business-Wide

Within senior leadership, ethics and compliance are managed by the Chief Ethics and Compliance Officer (CECO), who reports to the PG&E Corporation Chairman and CEO. The CECO 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 CEO is responsible for:

- Building a best-in-class ethics and compliance 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 ethics and compliance culture
- Identifying areas of ethics and compliance risk, and developing action plans to prevent, detect and correct risks and issues

As part of our enterprise-wide strategic planning process, PG&E's senior executives from every line of business meet annually to review and assess our plans to manage compliance, including the identification and assessment of compliance obligations for each line of business. Broadly, this process enables PG&E to assess compliance obligations, determine the best way to address them and then allocate resources to successfully implement our strategy.

Each line of business follows a rigorous process to assess the likelihood and impact of various compliance risks. The results of these assessments are calibrated across the enterprise, objectively applying the same criteria to all areas of operational focus. Final plans for each line of business include developing mitigation strategies to improve compliance performance. These plans inform PG&E's deployment of resources.

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

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

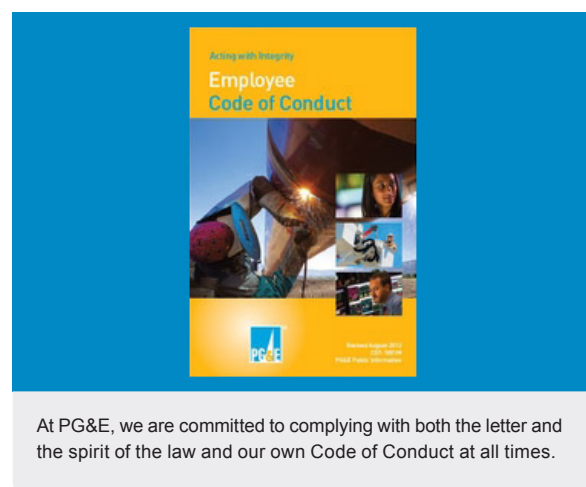
In addition, PG&E maintains a Chairman's Ethics Council—comprised of management and union-represented employees at multiple levels—that helps raise and address issues relating to ethics and conduct at PG&E. The Council meets regularly throughout the year, including one meeting that is open to all employees.

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 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 ■ Internal or external compliance reviews or audits ■ Oversees public policy, sustainability and corporate responsibility issues that could affect customers, shareholders or employees
Audit Committees	<ul style="list-style-type: none"> ■ Oversees and monitors compliance with legal and regulatory requirements in concert with other Board committees
Nuclear, Operations and Safety Committee ¹	<ul style="list-style-type: none"> ■ Oversees matters relating to safety, operational performance and compliance issues related to the Utility's nuclear, generation, gas and electric transmission, and gas and electric distribution operations and facilities

¹ Refers to 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 2016 Joint Proxy Statement.

Lines of Business

Each of PG&E's lines of business has compliance-focused employees who are responsible for the implementation of the line of business's compliance program, including the identification and review of its respective enterprise and operational compliance obligations. The line of business compliance programs are overseen by the business's senior leaders, who systematically lead the program through regular Risk and Compliance Committee meetings.

2015 Milestones

PG&E continued to take actions to foster an environment that prioritizes safe and ethical behavior. In 2015, we formed two new governance bodies to help drive and coordinate our compliance activities:

- **Compliance and Ethics Committee:** Led by the CECO, this senior-officer-level committee ensures coordinated, strategic guidance and oversight of the compliance and ethics program. This committee helps drive policy to provide reasonable assurance that PG&E achieves its financial, operational and strategic objectives in a manner consistent with its compliance obligations.
- **Compliance and Ethics Leadership Team:** Consisting of non-officer leaders from across PG&E, this team leads an ongoing strategy to enhance PG&E's compliance and ethics program. This group shares best practices and coordinates across lines of business on compliance and ethics approaches, goals and programs.

"We're committed to speaking up about issues, following the rules and fortifying our culture. That's the foundation for an open, transparent environment that prioritizes safe and ethical behavior."

— Tony Earley, Chairman of the Board, Chief Executive Officer and President of PG&E Corporation

We also created opportunities to reinforce the importance of speaking up and fostering an overall culture of compliance. One such example was inviting Dr. Kelly Richmond Pope, a renowned expert in business ethics, to address our workforce on Compliance and Ethics Day with more than 1,400 employees in attendance.

Measuring Progress

PG&E mandates annual compliance and ethics training for all employees, and requires that management employees annually certify that they have read, understand and will comply with our Employee Code of Conduct.

In 2015, more than 99 percent of employees completed our annual compliance and ethics training. The in-person training is facilitated by PG&E leaders, starting with the Chairman and CEO training his team, and is cascaded down through the organization. The sessions use videos to present employees with situations that they may face in the workplace and is conducted in workgroups to stimulate discussion and encourage participants to share experiences.

COMPLIANCE AND CONDUCT TRAINING ¹			
	2013	2014	2015
Compliance and Ethics Training	99.9%	99.8%	99.9%
Code of Conduct Training	99.9%	99.8%	99.8%

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

We also continued to operate our Compliance and Ethics Helpline for employees. The volume of Helpline calls that we received in 2015 was roughly 3.9 calls per 100 employees, falling within the normal range of 0.3 to 10.3 calls per 100 employees, according to a benchmark report prepared by NAVEX Global. The total call volume increased 23 percent over 2014, with a 16 percent increase in calls requesting guidance. This indicates that more employees are turning to the Helpline for advice before taking actions.

Looking Ahead

PG&E is committed to establishing a best-in-class ethics and compliance program, and we intend to drive continuous improvement by:

- Encouraging a “speak up” environment through training and communications campaigns
- Engaging our two new governance bodies to develop and drive cross-organizational enhancements to PG&E’s compliance and ethics program
- Adapting our employee engagement survey to assess PG&E’s ethical culture and measure progress
- Strengthening our processes to ensure all allegations of employee misconduct are consistently investigated and remediated
- Enhancing our approach for identifying and mitigating compliance-related risks
- Continually improving enterprise-wide monitoring and analytics
- Optimizing the compliance portion of our integrated planning process
- Implementing a compliance maturity model that will drive consistent, programmatic advancements across PG&E’s lines of business



All-Employee Meeting with the Chairman's Ethics Council

The Chairman's Ethics Council is designed to help raise and address issues relating to business ethics and conduct at PG&E. In 2015, the Council's all-employee meeting focused on the importance of creating a culture where all employees are comfortable speaking up.

Photo by Alma de la Melena Cox



Risk Management

PG&E takes a systematic approach to managing risk throughout our business, using an annual integrated planning cycle to identify and analyze risks and develop a coordinated strategy to manage them effectively. We work continuously to improve our ability to address risks of all kinds—from seismic activity and wildfires to “dig-in” incidents where third-party workers damage underground natural gas pipelines.

Our Approach

Risk at PG&E is managed on three levels:

Business-Wide

Among our senior executives, PG&E's Vice President of Internal Audit is responsible for overseeing enterprise and operational risk management, internal audit and insurance functions, reporting to the Audit Committees of the PG&E Corporation and Utility Boards. The Vice President and Treasurer is responsible for market and credit risk management and facilitates and is a voting member of the PG&E Corporation Risk Policy Committee and the Utility Risk Management Committee, which include a subset of senior officers of PG&E Corporation and the Utility.

Enterprise-wide Risk and Compliance teams are responsible for guiding PG&E's risk management process. On an annual basis, PG&E's senior executives from every line of business hold a two-day discussion to review and assess our plans to manage risk, including the identification and assessment of the top risks for each line of business. Broadly, this process enables PG&E to assess risks, set a strategy to address them and then allocate resources to successfully implement our strategy.

Further, the PG&E Internal Audit department provides independent verification regarding the adequacy of processes and controls to manage business risk, and provides advisory services to strengthen controls.

PG&E focuses on monitoring and managing three broad categories of risk across the business:

- **Enterprise and Operational Risk.** *This encompasses risks that could have a potentially catastrophic impact on public and employee safety, reliability, the environment, customer trust or PG&E's financial condition, as well as other risks that arise from our operations.*
- **Compliance Risk.** *This includes all programs that enable PG&E to comply with both the spirit and the letter of the applicable legal and regulatory requirements.*
- **Market and Credit Risk.** *This includes PG&E's exposure to risks associated with PG&E's energy portfolio, including trading in energy commodities, financial hedging and counterparty risk.*

Boards of Directors

The PG&E Corporation and Pacific Gas and Electric Company Boards and their 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
Nuclear, Operations and Safety Committee ¹	<ul style="list-style-type: none">■ Advises and assists the Boards of Directors with respect to the oversight and review of risk management practices related to the Utility's nuclear, generation, gas and electric transmission, and gas and electric distribution operations and facilities■ Oversees 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. Refers to 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 2016 Joint Proxy Statement.

Lines of Business

Each of PG&E's lines of business follows a rigorous process to assess the likelihood and impact of various enterprise and operational risks. The results of these assessments are calibrated across the enterprise, objectively applying the same criteria to all areas of operational focus.

Final plans for each line of business include metrics that evaluate risk management performance and assess, manage and monitor top risks. These plans inform how we deploy resources—leading to our practice of using risk-informed budget allocation.

2015 Milestones

We continued to review and refine our approach to risk management, examining all enterprise and operational risks. Our risk management governance structures allow risks to be investigated both under a Board of Directors-directed review process and also from a “bottoms-up” approach that allows operational experts to apply their knowledge and identify emerging issues for PG&E.



PG&E responds to help reduce risk of wildfires

With California in the middle of a multi-year drought, PG&E focused on key areas to reduce wildfire risk:

- **Enhanced vegetation inspection and mitigation:** Re-inspected nearly 44,000 miles of electric lines in areas of higher fire risk and removed hazardous trees that could contact power lines, potentially causing power outages or wildfires.
- **Fuel reduction and emergency response access:** Partnered with local Fire Safe Councils to provide \$2 million in funding for fuel reduction, emergency access and defensible space projects in local communities.
- **Early detection and response to wildfires:** Operated daily air patrols in four regions, with pilots spotting 96 fires during 2015, 20 of which were first reports.
- **Public education and awareness:** Partnered with CAL FIRE and local telecom companies to place remote fire detection cameras on fire lookout towers, and collaborated with California State University, Humboldt, on a study on forest health.

Looking Ahead

PG&E is committed to achieving a best-in-class risk management program, and continuing to employ risk-based decision-making in our integrated planning process and regulatory approach. Areas of focus include:

- A strengthened governance process to oversee risk management activities and progress
- Improved enterprise-wide monitoring and analytics
- An optimized risk portion of the integrated planning process



Gas Operations

Every day, PG&E works toward its goal to become the safest and most reliable provider of natural gas in the country. We have been conducting extensive safety testing, replacing and upgrading pipeline, and investing in advanced inspection, monitoring and control technologies. Though we have made progress, we have more to achieve. We are intent on building a 21st-century gas system that is stronger, safer and more durable than ever before.

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 42,800 miles of distribution pipeline (as well as additional mileage associated with connecting to individual gas services), 6,700 miles of backbone and local transmission pipeline, and various 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 employee safety as the single most significant driver of our work.

This approach has helped us achieve PAS 55-1: 2008 and ISO 55001: 2014 certifications for best-in-class asset management; become one of the first companies in the United States to meet the rigor of a new industry gold standard for pipeline safety and safety culture: the American Petroleum Institute Recommended Practice 1173 (API RP 1173); and become the first gas provider to meet the chemical industry's RC14001® management system standard.

2015 Milestones

Gas Transmission System

PG&E has embarked on one of the most comprehensive gas transmission modernization programs in the United States, if not the most aggressive. Since 2011, PG&E has achieved the following results through 2015.

- Validated safe operating pressure by strength-testing or locating strength-test records for more than 920 miles of gas pipeline.
- Replaced more than 155 miles of gas transmission pipeline.
- Automated 235 valves, enabling remote-control shutoff of gas in an emergency.
- Retrofitted more than 560 miles of gas transmission lines to accommodate in-line inspection tools, or “smart pigs,” that are used to inspect the internal condition of pipelines.

Gas Distribution System

The safety and reliability of PG&E’s gas distribution system has been enhanced with improvements in leak response and repair, the deployment of new tools and technologies, and an overhaul of our approach to records and information management.

We expanded our use of the world’s most advanced leak detection instrument, Picarro Surveyor™, which is 1,000 times more sensitive than normal leak detection devices. Other highlights from 2015 include:

- Reduced the backlog of minor non-hazardous workable leaks to an all-time low of 94—from about 12,200 in 2010.
- Responded to gas odor reports in an average of 20 minutes, representing top decile performance in the nation.

PG&E is also improving the quality of, and access to, our gas distribution records with the use of a Geographical Information System (GIS). This tool is designed to map, reconcile and analyze data from events involving PG&E assets. It is being deployed in concert with specialized employee training on how to use the centralized system.

Embedding Public Safety into our Operating System

PG&E is one of the first gas and electric providers to begin explicitly incorporating public safety metrics and targets into its operational goals and plans. We believe that tracking and reporting on these measures is essential. Examples of our accomplishments include:

- **Became one of the first companies in the U.S. to meet the rigor of a new industry gold standard for pipeline safety and safety culture.** The American Petroleum Institute Recommended Practice 1173 (API RP 1173), which outlines specific best practices for safe and effective pipeline operations underpinned by a healthy safety culture, was developed to provide a best-in-class framework for organizations that operate hazardous liquids and gas pipelines in response to major industry incidents.
- **Installed 235 automatic and remote shut-off valves.** This milestone completed another significant safety recommendation issued by the National Transportation Safety Board (NTSB) following the 2010 San Bruno accident. We have now satisfied 11 of the 12 safety recommendations made by the NTSB for improving the operations and management of our natural gas pipeline system.
- **Made significant progress to enhance the safe operation of our gas infrastructure.** Since 2011, we have validated safe operating pressure by strength-testing or locating strength-test records for more than 920 miles of gas pipeline, replaced more than 155 miles of gas transmission pipeline, retrofitted more than 560 miles of gas transmission lines to accommodate in-line inspection tools and collected and digitized more than 4 million records related to our transmission pipeline system and more than 12 million pages of records related to our distribution system.
- **Broke ground on a state-of-the-art training facility.** We began building a new training facility in Winters, California, which will provide teams with a best in-class training environment by teaching enhanced safety protocols via the use of the latest technologies. The facility will also have a significant positive economic impact on the community and region through hotel, sales and property tax revenue.
- **Developed and implemented cutting-edge technology.** PG&E deployed a number of new, innovative gas safety tools in 2015. Examples include testing the use of the NASA Jet Propulsion Lab’s methane sensor on handheld devices, as well as the use of drones for inspection of remote infrastructure and the use of radio frequency identification technology to locate subsurface assets. We also initiated phase one of a GIS tracking and traceability tool pilot project—technology that will provide gas construction crews with real-time access to detailed maps of our underground gas system.

Measuring Progress

In 2015, we achieved key milestones, completing the 10th and 11th of the 12 NTSB safety recommendations from its report on the San Bruno accident. The 12th and final NTSB safety recommendation, which includes strength-testing natural gas transmission lines, is in “open-acceptable” 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	2015
Gas Odor Response Times		
Average response time in minutes ¹	33.3	20.3
Percent response within 60 minutes	94.4%	99.6%
SCADA² Visibility and Control Points		
Transmission pressures and flows	1,300	2,480
Distribution pressures and flows	295	1,310
Leak Backlog		
Open Grade 2 and 2+ leak indications ³	12,203	94
Dig-In Reduction		
Excavation damage/1,000 excavation tickets	3.5	2.11
Gas Transmission		
Miles of pipeline replaced	9	>155
Miles of pipeline hydrotested	0	>750
Automated valves installed	0	235
Percent of system with GPS centerline data ⁴	0%	100%
Gas Distribution		
Miles of main replaced ⁵	27	>310

1. 2015 data represents top decile in the country.

2. Supervisory control and data acquisition.

3. Grade 2 and 2+ leaks are minor and non-hazardous.

4. GPS survey was completed for 100% of the accessible transmission pipeline system using highly precise mapping tools.

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

PG&E focuses on monitoring and managing three broad categories of risk across the business:

- **Enterprise and Operational Risk.** This encompasses risks that could have a potentially catastrophic impact on public and employee safety, reliability, the environment, customer trust or PG&E’s financial condition, as well as other risks that arise from our operations.
- **Compliance Risk.** This includes all programs that enable PG&E to comply with both the spirit and the letter of the applicable legal and regulatory requirements.
- **Market and Credit Risk.** This includes PG&E’s exposure to risks associated with PG&E’s energy portfolio, including trading in energy commodities, financial hedging and counterparty risk.



World’s largest sustainable portable LNG supports safety tests

To complete pipeline safety pressure tests in the Santa Cruz region, PG&E needed to take the area’s primary natural gas transmission line out of service for several weeks. PG&E was able to provide an alternate method of safe, uninterrupted gas service to 46,500 customers while testing was underway, using a portable liquefied natural gas/compressed natural gas (LNG/CNG) support program unparalleled in scope. Over the course of the project, PG&E safely injected more than 3.5 million pounds of LNG into the system so that safety pressure tests could be conducted in the area.

Photo by Chris Biedeman

Looking Ahead

PG&E continues to make progress toward becoming one of the safest and most reliable gas providers in the country. The California Public Utilities Commission approved a comprehensive scope of work through 2017 to:

- Replace vintage pipelines that could be at risk from land movements
- Continue testing pipelines to verify safe operating pressures
- Continue controlling corrosion to avoid underground leaks
- Install more automated and remotely operated safety valves to quickly turn off gas in case of an emergency
- Inspect the interior of more pipelines to detect and repair hidden flaws
- Strengthen levee and water crossings
- Maintain underground gas storage facilities that help meet demand on cold days
- Modernize infrastructure control systems, databases and risk analysis programs

We also continue our work to maintain our gas safety excellence status, including API RP 1173. Lloyd's Register will also return for an audit of our certifications under International Organization for Standardization (ISO) 55001: 2014 and Publicly Available Specification (PAS) 55-1: 2008. PG&E is one of the first companies in the world to hold both best-in-class gas system operator certifications. In 2017, PG&E's gas operations will undergo a full recertification of the asset management system against PAS 55/ISO 55001 standard requirements.

PG&E also became the first gas provider to meet the chemical industry's RC14001® management system standard. PG&E successfully passed a comprehensive gas safety audit reviewing numerous end-to-end safety processes to achieve certification to RC14001. This standard was issued through the American Chemistry Council for process safety; community communications; product safety; and occupational safety, health, environmental and security practices against which organizations can be evaluated and certified by a third party. The standard embodies the industry's Responsible Care® Guiding Principles.

PG&E expands greenhouse gas reduction commitment by joining EPA's Methane Challenge

PG&E furthered its commitment to reduce greenhouse gas emissions by joining the U.S. Environmental Protection Agency's Natural Gas Methane Challenge as a founding partner, joining with 40 other U.S. companies. This voluntary program, aimed at reducing emissions from the oil and gas industry, aligns with PG&E's goals to deliver safe, reliable and clean energy resources to its customers.



Electric Operations

Reliability is a cornerstone of PG&E's electric-service commitment to customers. It's vital to data centers that are the backbone of Silicon Valley. It's vital to farmers who put fruits and vegetables from the Central Valley on the plates of the nation. It's vital as students do their homework on a winter's evening and as families run air conditioners on hot summer days.

Due to the substantial investments that we've made to strengthen our infrastructure and implement the latest smart grid technology, reliability continues to improve. In fact, record-setting results over the past seven years are keeping the lights on for customers and helping power California's economy.

Our Approach

We build our multiyear strategic plan on lessons learned and progress made, allowing us to enhance our focus on continuous improvement across public safety, workforce safety, compliance, emergency preparedness, reliability, customer satisfaction and efficiency. Benchmarking our performance with other energy companies and identifying and adopting best practices are also fundamental to our approach.

To improve reliability, we regularly maintain and replace older equipment, upgrade other assets and implement new technology to monitor and restore power. With the state's persistent drought, we continue to work with local and state agencies to help reduce the risk of wildfires through enhanced inspection of vegetation along power lines and improved access for firefighters. This effort includes dozens of projects impacting and enhancing wildfire prevention in local communities.

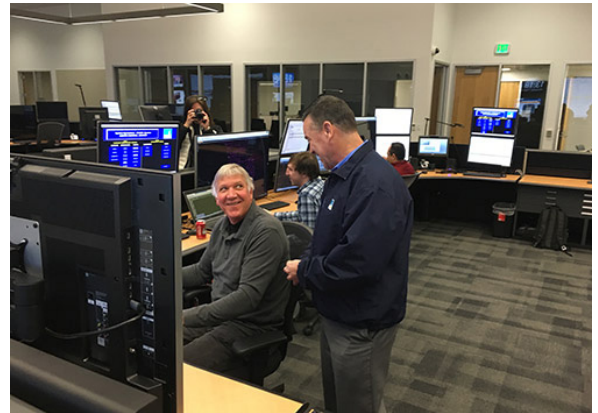
Preventing downed electric wires remains an area of particular focus. We are approaching this work in several ways: conducting infrared inspections of distribution lines, replacing splices and conductors, and dispatching engineers to inspect downed wires to identify the cause and recommended actions to prevent a recurrence. We are also working to identify, prune or remove trees that could pose a hazard to our wires.

2015 Milestones

PG&E continues to integrate a wide range of advanced communications and control technologies throughout our electric grid to help enhance the resiliency of the system and restore power outages more quickly.

Highlights from 2015 included:

- **Operating new distribution control centers.** PG&E has constructed three state-of-the-art electric distribution control centers that manage our more than 140,000 miles of electric distribution lines. The first control center opened in Fresno in late 2014 and is equipped with systems that support today's smart grid, as well as future upgrades. The second control center opened in Concord in August 2015 with a control-room theater the size of three NBA basketball courts. A third control center, in Rocklin in Placer County, opened in February 2016.
- **Invested in our system.** Throughout the year, PG&E upgraded our electric system with a multitude of local projects to enhance reliability and increase capacity. These ranged from upgrading power lines and replacing power poles in Sonora to installing intelligent switches in Sutter County to using helicopters to upgrade seven miles of transmission towers and power lines along the well-traveled Dumbarton Bridge between Newark and Menlo Park in the San Francisco Bay Area.
- **Installed advanced automation technology on power lines throughout our service area.** This technology, now installed on more than 700 electric distribution circuits, can automatically "self-heal" the grid by rerouting the flow of electricity around a damaged power line, often restoring power to the majority of impacted customers within minutes. Since the program began in 2012, these systems have been installed on more than 20 percent of PG&E's electrical distribution circuits and have helped the company avoid 130 million customer outage minutes and prevented more than 1.3 million customers from experiencing a sustained outage.
- **Leveraged SmartMeter™ technology.** A foundational component of a more intelligent electric grid is the network of nearly 10 million electric and gas SmartMeter™ devices installed across our service area. The electric meters provide near real-time energy usage data to utilities and customers through digital communications. They also enable PG&E to better detect areas affected by outages, resulting in faster and more accurate service restoration.



PG&E completes move to high-tech electric distribution control centers

With the opening of a third electric distribution control center in Placer County, PG&E completed a successful multiyear project that has transformed how we monitor and operate the energy grid. Together, the three centers will benefit customers through enhanced reliability, quicker response to outages and emergencies such as natural disasters and continued integration of clean and renewable energy into PG&E's energy supply.

Measuring Progress

In 2015, the average PG&E customer experienced less than one outage during the year, contributing to record electric reliability to customers for the seventh straight year.

The average time a PG&E customer was without power (SAIDI) was 96 minutes, representing a 50 percent improvement since 2006. The average number of power interruptions per customer (SAIFI) dropped to 0.871, 40 percent less than in 2006.

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

- *System Average Interruption Duration Index (SAIDI) measures the number of minutes over the year that the average customer is without power.*
- *System Average Interruption Frequency Index (SAIFI) measures the system-wide frequency of power interruptions per customer.*

BENCHMARKING PG&E'S RELIABILITY PERFORMANCE¹

SAIDI (minutes)	
2015 Target	106.6
2015 Actual	96.0
5-Year Average	119.2
SAIFI (interruptions per customer)	
2015 Target	0.957
2015 Actual	0.871
5-Year Average	1.022

1. Beginning in 2012, in an effort to help ensure consistency with industry standards, PG&E included both planned and unplanned outages in setting targets and measuring performance for reliability; previously, planned outages were not included.



PG&E completes major upgrade of San Francisco's Mission Substation

PG&E's Mission Substation, a three-story building in downtown San Francisco that powers parts of the city's Financial District, is now better equipped to handle emergencies as well as growing demand, thanks to PG&E's extensive modernization project. The \$4.4 million upgrade included substantial investment in the site's internal infrastructure and improvement to the building's aesthetics. The project is part of PG&E's plan to invest \$1.2 billion in San Francisco's electric and gas infrastructure to improve overall safety and reliability.

Looking Ahead

The energy grid is changing and so are the needs and demands of our customers. That's why we are developing, building and maintaining a grid that allows customers to take full advantage of the many new energy technologies becoming available today and in the near future—and in a way that gives them maximum flexibility, choice and value.

We call this the Grid of Things™—perhaps best described as a “plug-and-play” platform that allows energy technologies to be interconnected with each other and integrated into the larger grid. Just like the internet maximizes the benefits of the billions of things connected to it, the grid has begun to do the same for customers' energy technologies.

Among other elements, the grid will interact with private solar installations, battery storage systems and consumer mobile applications, giving PG&E greater visibility into operations to improve reliability and balance renewable energy with conventional sources.

PG&E already has a number of projects and investments underway, including smart grid infrastructure modernization.

Building this future requires that energy providers are ever mindful of threats to cybersecurity as more operational and customer data becomes digital. Another key is to diligently test and pilot new



PG&E launches distributed energy resource projects in San Jose

PG&E announced the launch of multiple technology demonstration projects in San Jose to advance integration of distributed energy resources, such as solar power installations and battery storage systems, and further unlock benefits of the electric grid.

PG&E is teaming up with GE to demonstrate a Distributed Energy Resource Management System (DERMS), with SolarCity to install and test smart inverters and battery storage systems, and with Green Charge Networks to install energy storage. The demonstrations will help evaluate to what extent the DERMS technology enables the safe, reliable and affordable operations of a grid with increased levels of distributed energy resources.

Photo by U.S. Department of Energy

technologies on a small scale before deploying them more broadly. Doing so will help ensure that investments are beneficial for our customers and also advance California's energy policy goals.

To that end, PG&E's San Ramon Technology Center houses a variety of technical labs and a wide array of specialized equipment, much of it dedicated to testing smart grid technologies. At the site, employees have researched and tested electric vehicle chargers, various battery storage technologies, wireless Home Area Networks (which link to SmartMeter™ devices), home energy displays and smart thermostats.

PG&E also continues to work on a series of pilot projects to demonstrate technologies that could be used to increase reliability, reduce costs and the environmental impacts of electric system operation, and more effectively integrate distributed renewable generation on PG&E's distribution system.

Together, these and other steps will help PG&E prepare for the future by making the grid smarter, more flexible and more resilient—while continuing to provide the safety, reliability and affordability that our customers count on.



Technology demonstration and deployment

In 2015, PG&E added 15 demonstration projects as part of the Electric Program Investment Charge (EPIC) program, which enables PG&E to work with the other California investor-owned utilities and the California Energy Commission to develop smart grid technology demonstration and deployment programs.

Through the program, PG&E is demonstrating technology across four areas: renewables and distributed energy resource integration, grid modernization and optimization, customer service and enablement, and cross-cutting foundational strategies and technologies.

EPIC projects include:

- Demonstrating energy storage technologies for enhanced market operations.
- Integrating and analyzing large data sets to optimize asset risk management.
- Piloting an electric vehicle (EV) submetering program that would provide customers greater insight into their energy use.
- Drawing together diverse data sources to give grid operators a more complete perspective to optimize operations with situational intelligence.
- Testing physical devices, such as robots, that help perform maintenance on switches with elevated risk.
- Demonstrating the viability of plug-in electric trucks that can, for example, keep an American Red Cross facility functioning during a wildfire or a planned outage.



Clean Energy

PG&E delivers some of the nation's cleanest energy, with goals that are in step with California's evolving clean energy policy and standards.

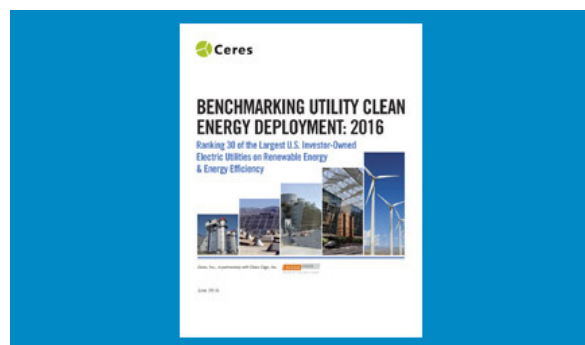
We believe that an integrated and flexible approach will allow the state and PG&E to meet our long-term environmental goals, grow California's economy and reduce greenhouse gas emissions in a way that manages costs for customers, ensures electric reliability and gas safety, and creates a model for others to follow.

Our Approach

California has one of the highest renewable energy targets in the nation, benefitting from a "loading order" that prioritizes energy efficiency and renewable energy in meeting customer demand.

This includes Senate Bill (SB) 350, which increases the state's Renewable Portfolio Standard (RPS) to 50 percent by 2030 and doubles state energy efficiency goals. PG&E supported SB 350 as an important step toward achieving California's aggressive climate change and clean energy goals. PG&E also supported the bill's challenging targets on energy efficiency, which we will strive to meet using our full array of tools and programs. We appreciated the bill's efforts to advance discussions on electric vehicle adoption, which we view as key to California's energy future, along with private solar installations and investments in smarter energy infrastructure.

We embrace the central role that California's gas and electric providers can play in the state's evolving energy needs. That's why we have made clean energy a pillar of our business and are on track to meet California's renewable energy target of 33 percent by the end of 2020, and to do so ahead of schedule.



PG&E recognized by Ceres for clean energy, energy efficiency success

PG&E earned a top ranking for delivering clean energy to customers and implementing effective energy efficiency programs, according to a Clean Energy Utility Benchmarking Report released by Ceres, a leading environmental sustainability advocacy organization. Clean-tech sector research and advisory firm Clean Edge co-produced the report. The study ranked 30 of the largest U.S. investor-owned electric companies on renewable energy and energy efficiency.

Reflecting California’s changing energy landscape, PG&E announced in June 2016 a Joint Proposal with labor and leading environmental organizations that would increase PG&E’s investment in energy efficiency, renewables and storage beyond current state mandates while phasing out PG&E’s production of nuclear power in California by 2025. It includes PG&E’s commitment to a 55 percent renewable energy target in 2031, an unprecedented voluntary commitment by a major U.S. energy company.

California’s transition toward more renewable energy, as well as a smarter grid, has also spurred investment in energy storage technologies. California’s energy storage target requires investor-owned utilities to procure 1,325 MW of storage by 2020, with PG&E’s share at 580 MW. In 2015, PG&E presented our first 75 MW of energy storage contracts to the California Public Utilities Commission for review and approval.

Measuring Progress

By the end of 2015, nearly 30 percent of the electricity that we delivered to our customers came from Renewable Portfolio Standard-eligible resources. The chart below shows our overall electricity supply mix for 2015, which included both the energy that PG&E generated and the energy that PG&E purchased from third parties on behalf of customers.

More than 58 percent of the electricity that PG&E delivers to customers comes from greenhouse gas-free and renewable resources—helping achieve a carbon dioxide emissions rate two-thirds cleaner than the national utility average.

PG&E'S 2015 ELECTRIC POWER MIX DELIVERED TO RETAIL CUSTOMERS¹	
Eligible Renewable (see accompanying breakdown)	30%
Natural Gas	25%
Nuclear	23%
Large Hydroelectric	6%
Coal²	0%
Other³	0%
Unspecified Power⁴	17%

1. Due to rounding conventions, some data above sum to an amount greater or less than the totals provided.

2. Refers to PG&E's owned generation resources and electricity generated under contracts with third parties.

3. Includes diesel oil and petroleum coke (a waste byproduct of oil refining).

4. Refers to electricity generated that is not traceable to specific generation sources by any auditable contract trail.

Breakdown: Composition of PG&E's 2015 Total Eligible Renewable Resources¹	
Solar	38%
Wind	26%
Geothermal	17%
Biomass and Waste	15%
Eligible Hydroelectric	4%

1. As defined in Senate Bill 1078, which created California's Renewable Portfolio Standard, an eligible renewable resource includes geothermal facilities, hydroelectric facilities with a capacity rating of 30 MW or less, biomass, selected municipal solid waste facilities, solar facilities and wind facilities. These figures are preliminary and will not be finalized until verified by the California Energy Commission.

Looking Ahead

By following the California loading order, adding renewable energy and leveraging emerging technologies, PG&E has proven that energy companies have a unique ability to achieve emissions reductions and accelerate the use of greenhouse gas-free resources—and to do so on a large scale.



Pursuing energy storage

Energy storage has been a part of PG&E's power mix for decades, starting with the Helm's Hydroelectric Facility and continuing with pilot projects such as the 2 MW battery storage pilot at PG&E's Vacaville substation and the 4 MW battery system at a customer site in San Jose.

PG&E has also conducted a feasibility study to demonstrate the viability of advanced underground compressed air energy storage (CAES) technology, and we are exploring third-party offers to develop CAES projects in the future. As envisioned, the project

would store large amounts of energy from resources such as variable renewable energy that may be generated at times when it is not needed by customers; this excess energy would be used to power large compressors to store the energy as high-pressure air in an underground reservoir. The air would then be withdrawn to power an industrial turbine generator set to produce electricity when demand is highest.

Photo by James Green



Renewable Energy

The majority of PG&E's clean energy comes from a large and expanding supply of renewable sources, including solar, wind, geothermal, small hydroelectric and various forms of bioenergy. We remain on track to meet or exceed the state's clean energy goals, with nearly 30 percent of our delivered power coming from eligible renewable resources in 2015, and we have committed to a 55 percent renewable energy target in 2031, an unprecedented voluntary commitment by a major U.S. energy company.

Our Approach

PG&E uses a range of options to reach California's renewable energy goals, including competitive solicitations to procure renewable energy from third parties and owning renewable energy projects ourselves. As we expand our clean energy portfolio, we work collaboratively with regulators, environmental organizations and other stakeholders to ensure that we achieve this growth in a way that is affordable for our customers.

California's Renewable Energy Targets

PG&E supported Senate Bill (SB) 350, which increases the state's Renewable Portfolio Standard (RPS) to 50 percent by 2030. We have made significant progress toward that goal, with nearly 30 percent of the energy delivered to customers coming from eligible renewable sources in 2015. This puts us well on our way to meeting California's previously established target of 33 percent by the end of 2020. Importantly, SB 350 confirmed and expanded the flexibility to bank excess renewable energy procurement, which provides PG&E with the opportunity to secure the best renewable energy pricing available on the market for our customers.

2015 Milestones

PG&E added eight new long-term contracts to its portfolio of renewable energy supplies in 2015 through the Photovoltaic Request for Offers and the Renewable Auction Mechanism (RAM) program. These solar contracts represent 143 MW of renewable projects. In addition to providing customers with more renewable energy, many of these projects also have a positive economic effect on surrounding communities.

In addition, two large projects under contract were completed in 2015:

- **Copper Mountain II.** Located in Clark County, Nevada, this 150 MW solar photovoltaic (PV) project was built by First Solar. The final 58 MW became operational in 2015, following the first 92 MW which achieved commercial operation in 2012.
- **North Star Solar.** This 60 MW PV facility in Fresno County was built by Southern Power and First Solar and also achieved commercial operation in 2015.

In 2015, PG&E earned recognition for a variety of renewable energy development accomplishments:

- *The Solar Electric Power Association recognized PG&E for the most annual installed PV capacity for the seventh consecutive year.*
- *Among investor-owned utilities, Ceres ranked PG&E second in providing renewable energy in its report, Benchmarking Utility Clean Energy Deployment.*

Measuring Progress

We continued our progress toward meeting California's renewable energy mandate. By the end of 2015, nearly 30 percent of the electricity delivered to our customers came from RPS-eligible resources. California's RPS is measured by the percentage of total retail sales that come from RPS-eligible resources.

The majority of our renewable resources come from contracts with third-party renewable energy companies. Overall, PG&E has contracted for more than 12,500 MW of RPS-eligible energy since the start of California's RPS program in 2002. PG&E's RPS-eligible portfolio includes more than 7,400 MW of active contracts through January 2016; approximately 6,600 MW of these are delivering energy to PG&E, with about 800 MW under development as of January 2016.

RENEWABLE PORTFOLIO STANDARD—ACTIVE CONTRACTS AS OF JANUARY 2016¹

Type	Number	MW	% By Count	% By Capacity
Bioenergy	31	530	11%	7%
Geothermal	4	447	1%	6%
Small Hydro	91	316	32%	4%
Solar PV	123	3,394	43%	45%
Solar Thermal	4	741	1%	10%
Wind	32	2,042	11%	27%
Total	285	7,469	100%	100%

1. Includes new RPS procurement through the RPS, RAM, RAM for PV Program, PV Request for Offers, Qualified Facilities, Renewable Energy Market Adjusting Tariff / Feed-in Tariff (ReMAT/FIT), Renewable Energy Credit only, and Etiwanda Irrigation District Water Authority. Excludes utility-owned generation, terminated contracts and expired contracts.

PG&E also saw growth in the number of signed contracts from its Feed-In Tariff (FIT) program, which offers a standard form contract and payment for renewable projects up to 3 MW within our service area. PG&E's portfolio includes 10 FIT contracts that were executed in 2015, representing 15 MW of RPS-eligible capacity.

Looking Ahead

PG&E is committed to working with policymakers, regulators, customers and other stakeholders to continue California's strong growth in renewable energy. Key to this growth is getting the policies right.

Today, technology and market forces are evolving faster than the regulatory framework. Addressing this gap will require taking a holistic view that balances growth in renewables with the need to manage costs for customers and recognize the early investments by PG&E and others in clean-energy technologies that helped nurture the market to evolve. It also requires keeping the focus on the fundamental goal of reducing carbon emissions.

Additionally, as we transition to an economy where energy is generated and used differently, the energy grid will need to be valued in ways that reflect the services provided, rather than the amount of energy delivered. That will mean moving toward a rate structure where energy companies are compensated for the grid services that they provide to customers, and customers receive clear value for what they bring to the energy grid, from private solar installations to electric vehicles.

This approach would enable PG&E to find the most viable renewable energy options and apply them to the greatest effect while safely and reliably providing the best value for customers.



Hydroelectric Operations

As the owner and operator of the nation's largest investor-owned hydroelectric system, PG&E works diligently to be a responsible steward of our water resources, particularly as the drought in California continues. This approach holds true both for managing water supplies for fisheries and downstream users as well as at our hydroelectric facilities.

Our Approach

PG&E's hydroelectric system consists of 67 powerhouses, including a pumped storage facility, with a total generating capacity of nearly 4,000 MW that relies on nearly 100 reservoirs. We manage our hydroelectric system to ensure the safety of the public and our workforce, protect wildlife habitat and sensitive species and maintain popular recreation venues for the communities that we serve, including campgrounds, picnic areas, boat launches, trails, fishing streams and whitewater flows. As a consistent power source, hydropower also enables us to better integrate variable sources of power like wind and solar generation into the grid.

As California experiences one of the most severe droughts on record, PG&E is working closely with water districts, first responders and regulatory agencies to address the drought's effects, including limited water deliveries, increased fire danger and environmental impacts.

Working Collaboratively

PG&E's hydroelectric system consists of 26 federally licensed projects. During the license renewal process, we have made it a priority to work collaboratively with stakeholders, such as federal and state agencies, local community members, environmental



For PG&E's hydropower, every drop counts

The work of PG&E hydrographers is vital as they travel to designated courses in the high Sierra Nevada and Southern Cascades to measure water supply in snowpack. The greater the snowpack during winter months, the more clean and affordable energy PG&E can supply during summer.

organizations, Native American tribes, fishing interests and agricultural landholders. Together, we assess the impacts of these projects and work to reach agreement on appropriate resource management measures to include as conditions of the new licenses, such as fish and wildlife habitat protection and recreational opportunities.

Investing in Safety and Reliability

Many of PG&E's dams and powerhouses have been in service for more than 75 years, and some of the water collection and transport systems date back to California's gold mining years. We inspect and maintain our entire hydroelectric system according to strict safety guidelines, ensuring structural integrity under normal and extreme conditions. We continue to make significant investments to repair and upgrade these water conveyance systems to ensure their ongoing safety and reliability. In addition, we continue to engage customers in populated areas downstream from PG&E dams through safety outreach.

2015 Milestones

As the drought in California continues, PG&E's focus remains on safely and reliably operating our hydroelectric system.

We are continually analyzing reservoir and stream conditions while collaborating with regulatory agencies and other stakeholders to conserve water whenever possible in individual regions. Together, we are working to assess the required water releases from our reservoirs to lessen the drought's impact on the environment and prolong availability of water for downstream users' needs.

Our commitment also includes working to manage our hydroelectric facilities in a manner that restores and enhances habitat for fish and other wildlife. Examples of our efforts include:

- **Shasta Crayfish Reintroduction.** PG&E signed a Safe Harbor Agreement with the U.S. Fish and Wildlife Service (USFWS) and the California Department of Fish and Wildlife—paving the way to reintroduce highly endangered Shasta crayfish into a tributary of Hat Creek on PG&E land. Additionally, a short distance downstream on PG&E land, the federal and state agencies completed a meadow restoration project in mid-2016. The restored habitat has the potential to double the number of Shasta crayfish now in existence.
- **Wetland Habitat Improvement Project.** We restored approximately 500 acres of wetland habitat on PG&E property located along the Pacific Flyway, a major path for migratory birds that extends from Alaska to Patagonia. The restored swamp has seen a 20-fold increase in migratory waterfowl, which are benefitting from the feeding and nesting habitat constructed by PG&E in collaboration with the California Waterfowl Association.
- **Battle Creek Salmon and Steelhead Restoration Project.** In Tehama County near Mount Lassen, we continue to work with federal, state and regional agencies, conservation organizations and other groups to restore historic salmon runs along Battle Creek. This project is one of the country's largest cold water fish restoration efforts. Between 2009 and 2019, we are removing five of the eight diversion dams in the area and retrofitting the remaining three with fish screens and ladders to allow spawning fish to travel upstream through 48 miles of streams and habitat.
- **Butte Creek.** In Butte County, PG&E's DeSabra-Centerville hydroelectric project provides a unique benefit to endangered Chinook salmon and steelhead. An eight-mile diversion canal brings colder water from the Feather River to Butte Creek, increasing spawning and holding habitat for these endangered fish. Additional efforts include work to improve water quality, install fish screens and remove barriers to fish migration.



PG&E urges planning on National Dam Safety Awareness Day

In recognition of National Dam Safety Awareness Day, PG&E urged those living or working below dams to recognize the signs of a potential dam breach and to maintain a current evacuation plan. PG&E owns 170 dams in Northern and Central California as part of our hydropower system.

Measuring Progress

We gauge our hydroelectric performance in a number of ways, primarily through our compliance with environmental requirements for our operating licenses. Our compliance rate in 2015 was 98.8 percent, nearly matching the prior year's rate of 99.0.

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—2015	
Miles of stream monitored for environmental condition ¹	603
Acres of bird nesting territories monitored ²	8,125
Acres monitored and/or treated for noxious weed control	2,847
Acres monitored for use by special-status species ³	1,095

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.

PG&E reminds customers to be safe

The reservoirs, dams, rivers and streams near PG&E's hydroelectric facilities are available to the public for swimming, fishing and boating, as are campgrounds, picnic areas, boat launches and hiking trails. Before visiting any of these recreation sites, PG&E encourages our customers to learn about hydropower and how to be safe when recreating near a facility by visiting www.pge.com/hydrosafety.

Looking Ahead

As the drought in California persists, PG&E will continue to partner with policymakers, regulators, private industry and other stakeholders to manage the availability of water for hydroelectric power while minimizing fire danger and impacts to the environment and the communities we serve.



PG&E tests drones, new safety tool for inspections of remote infrastructure

The Federal Aviation Administration granted PG&E permission to begin testing the use of small drone aircraft to inspect our facilities. The first test was completed in the Sierra Mountains high above Fresno at PG&E's Balch 1 Powerhouse. The rough terrain makes it challenging for employees to conduct assessments. By using a drone, we are able to inspect the entire facility and determine areas that need to be addressed.

Photos by James Green



Conventional Sources

Three highly efficient and flexible natural-gas-fueled power plants contribute to PG&E's diverse portfolio of generation resources. As we add more renewable energy to our power mix, these cleaner conventional plants can increasingly act as a backstop. With their ability to generate power quickly and safely, they provide the operational flexibility needed to integrate variable renewable resources such as wind and solar.

Our Approach

PG&E operates three natural-gas-fired plants with emissions levels that are best-in-class and use air for cooling to minimize water use:

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

As combined-cycle power plants, the Colusa and Gateway Generating Stations play a key role in PG&E's efforts to successfully integrate more renewable resources into the energy grid. When wind or solar production changes throughout the course of a day, these facilities can ramp up quickly to generate the energy that our customers need.

2015 Milestones

In 2015, PG&E continued the safe operation of our three natural-gas-fired plants:

- **Humboldt Bay Generating Station:** This 163-MW natural gas plant is 30 percent more efficient than the older fossil-fueled plant it replaced. It employs technology that emits significantly less SO₂, NO_x and CO₂ than the previous facility.

The 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 StationColusa 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 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 StationGateway Generating Station:** This 580-MW combined-cycle natural gas plant has 530 MW of base capacity and 50 MW of low-cost peaking capability. On average, the plant yields dramatically less NO_x, SO₂ and CO₂ for every megawatt-hour of power produced compared with older fossil-fueled plants. Gateway also uses dry cooling technology.



Measuring Progress

In 2015, 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.

NATURAL GAS POWER PLANT AVAILABILITY FACTOR ¹			
	2013	2014	2015
Gateway Generating Station	94.4%	93.1%	94.7%
Colusa Generating Station	93.8%	87.7%	92.7%
Humboldt Bay Generating Station	95.4%	95.2%	93.0%

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

Looking Ahead

Clean and flexible conventional power generation will continue to play an integral role in meeting our state’s evolving energy needs, especially as more renewable sources come online. Our focus remains on maintaining, upgrading and safely operating our current facilities while further increasing the flexibility of our units to support continued growth in renewable and distributed energy resources.



Nuclear Operations

Diablo Canyon Power Plant is a safe, clean and reliable energy resource for California and generates carbon-free energy for more than 3 million people. Diablo Canyon also serves as one of the main employers and buyers of goods in the San Luis Obispo County region.

Our Approach

We remain strongly committed to the highest levels of safety, performance and security at Diablo Canyon. The Nuclear Regulatory Commission's (NRC) 2015 assessment places Diablo Canyon among the higher 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.

Demonstrating Earthquake, Flooding and Tsunami Safety

New and extensive analyses performed at the direction of the NRC reaffirmed that Diablo Canyon can safely withstand extreme natural events, including potential earthquakes, tsunamis and flooding. The analyses used the latest regulatory guidance, scientific methods and models, site-specific information and independent expertise to reevaluate the impacts that earthquakes, large waves and flooding could have on the facility. The updated findings represent the culmination of years of study and analysis, and further confirm the safety of the plant's design.

The updated seismic assessment represents a more extensive evaluation of the seismic hazard than previously performed. Using the NRC's Senior Seismic Hazard Analysis Committee process, independent seismic experts publicly re-evaluated existing and new seismic information to reevaluate how earthquakes could potentially impact the facility. The result provides additional confirmation that the plant is seismically safe.

The assessment also informs PG&E's Long-Term Seismic Program, led by a geosciences team of professionals that partners with independent seismic experts on an ongoing basis to evaluate regional geology and global seismic events to ensure that the facility remains safe.

PG&E's flooding hazard re-evaluation determined that the plant's key safety systems and components continue to be safe from tsunamis, including those generated from underwater landslides and earthquakes.

Used Fuel Storage

At both Diablo Canyon and a former nuclear unit at Humboldt Bay Power Plant, PG&E safely stores used fuel in on-site dry cask storage systems approved and licensed by the NRC. Diablo Canyon also safely and securely stores used fuel in wet storage facilities. These on-site storage systems are 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. The ability to store used fuel safely on-site, however, should not be a long-term alternative to the federal government assuming its responsibility to accept the fuel for permanent storage. To that end, PG&E will continue to advocate that the federal government meet its commitment and take charge of managing the nation's used fuel.

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.

2015 Milestones

In a typical year, at least one of Diablo Canyon's two reactor units safely undergoes a planned refueling and maintenance outage. Once every five years—most recently in 2014—both units undergo a planned refueling and maintenance outage, due to their separate operating schedules.

In 2015, Unit 1 at Diablo Canyon underwent a safe and successful refueling and maintenance outage.

PG&E also continued decommissioning the former nuclear unit at Humboldt Bay Power Plant. PG&E has completed removal of prior operational nuclear systems and equipment, as well as demolition and removal of some structures on-site. Final site restoration and remediation plans have been approved by the NRC, and permits to support that work also have been approved.

Measuring Progress

Diablo Canyon consistently achieves strong performance as gauged by the plant's capacity factor, a measure of generation reliability. In 2015, the plant's capacity factor saw a marked increase, which can be attributed to a continued focus on operational excellence and the fact that we held planned outages to refuel both units at the plant in 2014.

Diablo Canyon is a vital local economic engine and brings significant benefits to San Luis Obispo and Northern Santa Barbara counties. Planned refueling outages can bring almost 1,000 temporary workers to the Central



Visitors can learn about the plant and a range of energy-related topics at our Energy Education Center and the Diablo Canyon website. Also, guided tours of Diablo Canyon provide an opportunity to speak directly with employees and learn how the plant provides safe, reliable and clean energy.

Photo by John Lindsey

Beyond energy: Giving back to the local community

PG&E employees volunteer thousands of hours of their personal time each year to after-school athletic programs, environmental organizations, churches and other community organizations. In 2015, PG&E also made charitable contributions of nearly \$900,000 to more than 110 nonprofit organizations in San Luis Obispo and Northern Santa Barbara Counties. Local PG&E employees pledged more than \$730,000 to nonprofit organizations through PG&E's Campaign for the Community.

NUCLEAR POWER PLANT PERFORMANCE	
Average Capacity Factor ¹	
2013	92%
2014	87%
2015	94%

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.

Coast where they spend money on local housing, dining and shopping. In advance of planned outages, PG&E holds jobs fairs at our Energy Education Center in San Luis Obispo to help fill the temporary positions.

Beyond these temporary jobs, PG&E is the largest private employer in the area, with nearly 1,500 workers and operations that contribute more than \$900 million to the region through the funds that we directly spend and the subsequent economic activity in the community from those investments. Tax revenues from the plant, the largest property tax payer in San Luis Obispo County, help fund schools, public works projects, public safety, and health and other vital services.

Looking Ahead

California's energy landscape is changing dramatically with energy efficiency, renewables and storage being central to the state's energy policy. In step with this policy, PG&E announced a joint proposal with labor and leading environmental organizations in June 2016 that would increase investment in energy efficiency, renewables and storage beyond current state mandates while phasing out PG&E's production of nuclear power in California by 2025.

The parties to the joint proposal are PG&E, the International Brotherhood of Electrical Workers Local 1245, the Coalition of California Utility Employees, Friends of the Earth, the Natural Resources Defense Council, Environment California and the Alliance for Nuclear Responsibility.

The parties jointly propose that Diablo Canyon be replaced with a cost-effective greenhouse gas-free portfolio of energy efficiency, renewables and energy storage. It includes a PG&E commitment to a 55 percent renewable energy target in 2031, an unprecedented voluntary commitment by a major U.S. energy company.

Recognizing that the procurement, construction and implementation of a greenhouse gas-free portfolio of energy efficiency, renewables and storage will take years, the parties recognize that PG&E intends to operate Diablo Canyon until the end of its current NRC operating licenses, which expire on November 2, 2024 (Unit 1) and August 26, 2025 (Unit 2).

This eight- to nine-year transition period will provide the time to begin the process to plan and replace Diablo Canyon's energy with new greenhouse gas-free resources.

As part of the joint proposal, PG&E immediately ceased any efforts on its part to renew the Diablo Canyon operating licenses, and asked the NRC to suspend consideration of the pending Diablo Canyon license renewal application. PG&E will withdraw the application if the CPUC approves the joint proposal.

PG&E currently does not believe that long-term customer rates will increase as a result of the joint proposal. The company believes that it is likely that implementing the proposal will have a lower overall cost than relicensing Diablo Canyon and operating it through 2044. Factors affecting this include, in addition to lower demand, declining costs for renewable power and the potential for higher renewable integration costs if Diablo Canyon is relicensed.

The parties to the agreement are jointly committed to supporting a successful transition for Diablo Canyon employees and the community. PG&E's Diablo Canyon retention program will provide, among other things, incentives to retain employees during the remaining operating years of the plant, a retraining and development program to facilitate redeployment of a portion of plant personnel to the decommissioning project or other positions within the company, and severance payments upon the completion of employment.

In addition, the joint proposal includes payments by PG&E to San Luis Obispo County totaling nearly \$50 million. The proposed payments are designed to offset declining property taxes through 2025 in support of a transition plan for the county.

During the transition period, we will continue our efforts to ensure the safety of our operations at the power plant.



Corporate Governance

A commitment to strong corporate governance practices underpins our sustainability performance, helping to ensure that PG&E is managed and operated with integrity, accountability and transparency. 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, committee charters and codes of conduct for directors and employees.

Our Approach

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

- At least 75 percent of the directors of each company must be independent.
- An independent lead director is elected by the Board if the Chairman of the Board is not an independent director.
- Only independent directors are allowed to serve on PG&E Corporation’s standing Board committees, and each company’s Audit Committee and PG&E Corporation’s Compensation Committee members also meet additional independence standards.
- 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 we have practices in place to promote the development of balanced and multidisciplinary Boards. The Boards annually review director nominees and the extent to which diverse backgrounds, perspectives, skills and experiences are represented.

The Compliance and Public Policy Committee of PG&E Corporation's Board of Directors has primary oversight of compliance and ethics and corporate sustainability issues, such as environmental compliance and leadership, workforce development and climate change. This includes an annual review of PG&E's environmental performance and sustainability practices. Other committees of the PG&E Corporation Board and the full Boards address other components of PG&E's sustainability commitment, such as public and employee safety, investments made to modernize our gas transmission and distribution systems and build a smarter grid, and partnerships with others to increase our deliveries of renewable energy.

The PG&E Corporation and Pacific Gas and Electric Company 2016 Joint Proxy Statement includes disclosure of director qualifications and the oversight role of the Boards with respect to corporate responsibility and sustainability, risk management, political contributions and management succession, among other items.

2015 Milestones

In 2015 and early 2016, the Boards took action on the following corporate governance matters:

- Refreshed the composition of the Compensation Committee, the Finance Committee and the Nominating and Governance Committee of the PG&E Corporation Board by appointing new members to those committees.
- Clarified the description of the lead director's role and duties in the companies' Corporate Governance Guidelines to reflect the independent and active nature of this position and the interface between the lead director and the Chairman of the Board/Chief Executive Officer (CEO).
- Reinforced the companies' commitment to a best-in-class compliance and ethics culture and program by electing a Chief Ethics and Compliance Officer. This newly created position reports directly to the PG&E Corporation Chairman and CEO and the Boards of Directors, including the Audit Committees and the PG&E Corporation Compliance and Public Policy Committee.
- Enhanced Board oversight of the companies' compliance and ethics program by establishing the Compliance and Public Policy Committee. This Committee was established from the former Public Policy Committee of the PG&E Corporation Board of Directors. In addition to its responsibilities for public policy and corporate responsibility issues, this committee also assists the Boards and their respective Audit Committees in fulfilling the Boards' oversight duties with respect to compliance with legal and regulatory requirements and coordinating the compliance-related oversight work of the Boards' various committees.
- Proactively adopted proxy access bylaw provisions for PG&E Corporation. These provisions permit shareholders owning 3 percent or more of the Corporation's common stock for at least three years to nominate the greater of two directors or up to 20 percent of the Board, and to include these nominees in the Corporation's proxy materials. The number of shareholders who may aggregate their shares to meet the ownership threshold is limited to 20. Nominations are subject to the eligibility, procedural and disclosure requirements set forth in the Corporation's Bylaws.

In 2015, a PG&E Corporation shareholder proposal requesting adoption of an independent board chairman policy was supported by approximately 46 percent of the shares voted. To better understand the reasons for this level of shareholder support, management reached out to the Corporation's top institutional investors who had voted in favor of the proposal. We learned that while some institutional investors always support independent board chair proposals as a matter of policy, other investors vote on a case-by-case basis and considered the lead director's role and duties in their decision to support the shareholder proposal. Some of the investors that voted on a case-by-case basis conveyed the view that we could clarify or strengthen our description of the lead director's role and duties. We amended our Corporate Governance Guidelines based on this feedback.

Additionally, at the 2016 annual shareholder meeting, PG&E shareholders overwhelmingly approved proposed executive compensation in our annual advisory "say on pay" vote.

Measuring Progress

Annual Meeting Voting Results

Each year at the annual meeting, shareholders are asked to vote upon various items that may be proposed by management or by other shareholders. Proposals submitted by shareholders are either withdrawn by the shareholder (usually following discussions with management and a resolution of the shareholder's concern); excluded from consideration, according to Securities and Exchange Commission guidelines; or published in the annual joint proxy statement to be voted on by shareholders at the annual meeting. A summary of the annual meeting voting results from 2012 to 2016 is provided below.

ANNUAL MEETING VOTE SUMMARY: PG&E CORPORATION

Proxy Item	Percent In Favor ¹				
	2012	2013	2014	2015	2016
Election of directors (average) ²	96.1	97.9	97.6	98.2	97.6
Ratification of independent auditors ²	99.3	99.0	99.2	98.5	97.9
Advisory vote on executive compensation ²	80.7	96.3	89.6	94.3	80.1
Approval of long-term incentive plan ^{2, 3}	—	—	89.6	—	—
Independent board chairman ⁴	—	33.4	—	45.6	—
Exclude sexual orientation from equal employment opportunity policy ⁴	2.0	—	—	—	—

1. Defined as For/(For+Against), expressed as a percentage.

2. Management proposal.

3. Defined as For/(For+Against+Abstain) as required by the New York Stock Exchange, expressed as a percentage.

4. Shareholder proposal.

ANNUAL MEETING VOTE SUMMARY: PACIFIC GAS AND ELECTRIC COMPANY

Proxy Item	Percent In Favor ¹				
	2012	2013	2014	2015	2016
Election of directors (average) ²	99.9	99.9	99.9	99.9	99.9
Ratification of independent auditors ²	99.9	99.9	99.9	99.9	99.9
Advisory vote on executive compensation ²	99.8	99.9	99.8	99.9	99.8

1. Defined as For/(For+Against), expressed as a percentage.

2. Management proposal.

Corporate Governance Rankings

PG&E's corporate governance practices are evaluated by several institutional shareholder groups and corporate governance organizations, such as Institutional Shareholder Services Inc. (ISS), an independent provider of risk management and corporate governance products and services to financial market participants. We have consistently received above-average ratings, both within our industry and overall.

ISS GOVERNANCE QUICKSCORE SUMMARY¹

	Decile Rank ²
Overall Governance QuickScore	1
Board Structure	4 ³
Shareholder Rights	1
Compensation	2
Audit	10 ⁴

1. As of September 1, 2016.

2. A score of 1 indicates low risk; a score of 10 indicates high risk.

3. The Board Structure sub-score primarily reflects ISS's view on lengthy tenure for certain Board members.

4. The Audit sub-score reflects ISS's view of the CPUC penalty decision related to the San Bruno accident adopted on April 9, 2015, and does not take into consideration the corrective actions taken and improvements made to address issues underlying the San Bruno accident.

Looking Ahead

The Boards will continue to review PG&E's corporate governance practices in line with industry best practices and investor feedback, and will amend these practices when doing so is in the best interest of the companies and their shareholders.



Public Policy Engagement

PG&E's business as a regulated provider of gas and electricity is largely shaped by public policy at the local, state, regional and national levels. We regularly engage on a wide range of public policy matters that are important to PG&E and our customers, knowing that the evolution of these policies plays a significant role in achieving safe, reliable, affordable and clean energy for customers, as well as defining the structure of the market that impacts PG&E and other energy companies.

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 supporting our goal of environmental leadership.

This includes taking highly visible leadership roles on issues of local, state, national and international significance, such as our participation in events surrounding the COP21 international climate talks in Paris. PG&E Corporation's Chairman and CEO, who was among a number of senior leaders representing PG&E in Paris, advocated for developing a smart and resilient grid to deliver a low-carbon future for our customers, among related issues.

Prior to the Paris talks, PG&E Corporation's Chairman and CEO joined President Obama and senior administration officials at the White House as they announced new pledges by major companies to reduce greenhouse gases and address the impacts of global warming. PG&E was among the companies signing on to the administration's American Business Act on Climate initiative, which aimed at rallying U.S. companies behind the need for action on climate change.

Much of our public policy work is done through coalitions. For example, we actively work with trade organizations such as 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

with organizations such as the Business Council for Sustainable Energy, the Center for Climate and Energy Solutions, the Clean Power Plan Initiative, the Alliance to Save Energy, Friends of the Earth, the Natural Resources Defense Council, and the Environmental Defense Fund to advocate for responsible policies that support priorities such as energy efficiency and clean energy.

Additionally, we partner with the International Brotherhood of Electrical Workers (IBEW) and the International Federation of Professional and Technical Engineers on national energy policy, and the IBEW Local 1245, the Engineers and Scientists of California Local 20, and the International Brotherhood of Boilermakers on state energy policy.

Public Policy Governance at PG&E

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, our Senior Vice President of External Affairs and Public Policy 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 Board of Directors establishes management approval limits for political contributions from PG&E to candidates, measures, initiatives, political action committees and certain other organizations that may engage in political activity. These approval limits 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 both the letter and the spirit of 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.
- Nonprofit organizations, including those formed under Section 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

Selected public policy issues at the state level include:

- **Clean energy and climate change.** PG&E supported SB 350 as an important step toward achieving California's aggressive climate change and clean energy goals. Signed by California's governor, SB 350 increases the state's Renewable Portfolio Standard (RPS) to 50 percent by 2030, and doubles state energy efficiency goals. SB 350 supports the governor's April 2015 executive order, which set a new goal to reduce greenhouse gas emissions by 40 percent below 1990 levels by 2030. We continue to engage in public policy discussions that focus on the broader goal of delivering cleaner energy in a safe, reliable and affordable manner, including the regional, multistate expansion of California's Independent System Operator to help facilitate renewable energy integration across the West.
- **Safety of underground facilities.** PG&E has been a strong supporter of comprehensive legislation to protect underground utility facilities through an effective enforcement program. PG&E supported SB 661, which would create an independent board to investigate possible violations of the One Call law. The One Call law requires that homeowners, contractors and anyone with a project involving excavation call 811 to reach the Underground Service Authority, which will contact PG&E and other companies that may have underground lines in the area. Representatives from these companies will then mark the location of these lines so that projects may proceed safely.

Selected public policy issues at the federal level include:

- **Energy legislation.** We are focused on action related to electric vehicle deployment, grid innovation, making the hydro-power licensing and relicensing process more effective and efficient, pursuing electric reliability and vegetation management reforms, and energy efficiency and natural gas pipeline permitting improvements.
- **Infrastructure investment.** We support efforts to spur investment in our energy infrastructure, including resiliency in the face of climate change, protection of the physical and cyber security of the system and our vision for the Grid of Things™.
- **Pipeline safety.** PG&E fully supports the passage of S. 2276, the Securing America's Future Energy: Protecting our Infrastructure of Pipelines and Enhancing Safety Act of 2016—federal legislation that directs the U.S. Department of Transportation to establish new federal minimum safety requirements for pipeline operators, including standards for underground natural gas storage facilities. This new law includes important provisions to improve the federal pipeline safety program and is an important step in further enhancing public safety.
- **Workforce issues.** We support workforce diversity, hiring veterans and growing leaders from within. We advocate for public policy that supports public-private partnerships such as PG&E's PowerPathway program to create a pipeline of qualified veterans and others who can become highly skilled workers for the American economy and the energy industry. This includes our support for H.R. 3286, the HIRE Vets Act (the Honoring Investments in Recruiting and Employing American Military Veterans Act of 2015), which would establish an effective voluntary program to promote private sector recruiting, hiring and retention of men and women who have served honorably in the U.S. military through an awards program recognizing the meaningful and verifiable efforts undertaken by employers. We also support the Obama administration's focus on the role that the private sector can play in developing the capabilities and leadership skills of their team members.
- **Small business support.** We support the Obama administration's work to assist small businesses in addressing financial challenges, including acting as one of the initial 26 companies to participate in the administration's SupplierPay pledge.

Measuring Progress

In 2015, PG&E Corporation Employees EnergyPAC made contributions of \$554,000 at the federal level and \$3,000 at the state and local level. PG&E contributed \$2,934,328 to state and local political candidates, ballot measures, political parties and other committees. Additionally, in 2015, membership in the PG&E Corporation Employees EnergyPAC increased more than 15 percent over the prior year. Our annual political contributions are publicly reported on PG&E Corporation's website.

POLITICAL CONTRIBUTIONS, 2015

PG&E Employees Federal PAC Contributions

U.S. House	\$208,250
U.S. Senate	\$45,000
Leadership/Other PAC	\$300,750
Total	\$554,000

PG&E Employees State and Local PAC Contributions

Total	\$3,000
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Corporate Campaign Contributions

Total California Corporate Contributions to Candidates	\$368,325
Total Corporate Contributions to Other Committees	\$2,566,003
Total	\$2,934,328

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, 2015¹

Portion of Dues That Were Nondeductible

Total	\$566,597
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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.



PG&E-sponsored Energy Academy students meet leaders at State Capitol

PG&E Energy Academy students from Stockton and Sacramento had a unique experience at the California State Capitol: the opportunity to lobby state legislators and staff and advocate on behalf of their programs. PG&E brought 18 students from its Energy Academy programs at Foothill High School in Sacramento and Venture Academy in Stockton to the Capitol for the second annual Student Lobby Day.

Assemblywoman Susan Eggman (in black and white suit) meets with Energy Academy students.



Safety

For PG&E, nothing is more important than the safety of the public and our workforce. Our commitment to safety is deeply ingrained in our business, guiding the operating strategies for today and our plans for tomorrow.

As we continue to institutionalize the lessons learned from the tragic gas pipeline rupture in San Bruno six years ago, PG&E's progress can be seen in the substantial upgrades we've made to our energy systems, our close coordination with emergency officials and a culture where safety is the unwavering principle behind everything that we do.

Key Sustainability Indicators

Average response time to gas odor reports, top decile performance among natural gas providers:

20.33 minutes

Percentage of time PG&E personnel were on-site within 60 minutes after receiving a 911 electric-related call:

97.1%

Highlights

Continued to build a culture where employees feel empowered to speak up if they see any potential safety, security or compliance concerns.

Maintained a publicly available dashboard of public safety metrics across our operating lines of business.

Completed safety leadership workshops to align our leaders around PG&E's safety strategy and equip them with the tools they need to support their teams in building a safety-first climate.

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

Hosted nearly 700 training workshops to better prepare firefighters, police, public works officials and other authorities to respond to emergencies involving electricity and natural gas.

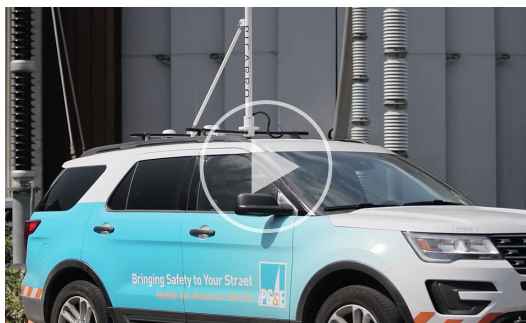
Partnered with local Fire Safe Councils on fire prevention efforts during California's wildfire season.

Conducted significant outreach to emphasize the importance of calling 811 before any excavation project.

Conducted more than 2,900 interactive electric and gas safety demonstrations for students, youth groups, contractors, emergency personnel and customers throughout our service area.

Implemented a contractor safety program to ensure our commitment to public and workplace safety extends to anyone performing work for PG&E.

Continued to integrate health and wellness into our safety organization to allow for a more comprehensive approach to evaluating health and safety programs.



Reducing methane emissions

PG&E is using emerging technologies to find and repair gas leaks—improving system safety and reducing methane emissions. Our efforts include using Picarro Surveyor™ leak technology, as well as leak detection technology pioneered with NASA's Jet Propulsion Lab and the potential use of small drone aircraft to inspect infrastructure that may be difficult to reach. PG&E furthered its commitment by joining the U.S. Environmental Protection Agency's Natural Gas Methane Challenge as a founding partner, joining with 40 other U.S. companies. This voluntary program, aimed at reducing emissions from the oil and gas industry, aligns with PG&E's goals to deliver safe, reliable and clean energy resources to customers.



Building a Safety-First Culture

At PG&E, safety is both our most essential value and our number one goal. We strive to foster a trust-based safety climate where through our actions and our words we reinforce the belief that nothing is more important than the safety of the public, our employees and our contractors. We promote an environment where open and honest conversations occur regularly and all employees feel empowered to speak up if they see any potential safety, security or compliance concerns—before or during a task or project—so that safety is embedded in our culture and across our operations.

Although we have made demonstrable progress in many aspects of our safety culture and operations, we recognize that room for improvement remains. Safety is not an end point but a journey—a road we continue to travel with focus and dedication.

Safety Culture Roadmap

Building on a comprehensive third-party evaluation of our leadership, processes, people and technology, PG&E developed a long-term safety culture roadmap to direct our work. In 2015, we emphasized supporting safety leadership development at every level and reducing exposure to potential serious incidents before they occur.

Safety Governance

The PG&E Corporation and Pacific Gas and Electric Company Boards of Directors are generally responsible for oversight of safety at PG&E. The Nuclear, Operations, and Safety (NOS) Committee of the PG&E Corporation Board is specifically

responsible for overseeing safety policies and issues related to the Utility's operations and facilities, as well as goals, programs, policies and practices with respect to promoting a strong safety culture.

In addition, the NOS Committee helps monitor the impact of changes in laws and regulations on safety performance at PG&E, and also advises the Compensation Committee of the PG&E Corporation Board on appropriate safety goals for inclusion in PG&E's executive compensation program and plans. Additionally, as part of its responsibility for reviewing proposed major capital projects, the Finance Committee of the PG&E Corporation Board reviews capital projects and programs with safety implications, such as projects and programs to enhance public or employee safety.

Our overall safety governance is led by the following management-level committees and teams:

- **Safety and Risk Committee:** guides our safety strategy and assures continuous improvement in safety performance. The Committee meets regularly to review performance and address gaps and barriers. In addition to the PG&E Corporation Chairman and CEO, members include Pacific Gas and Electric Company's presidents, additional senior PG&E officers and leaders from the IBEW and ESC labor unions.
- **Executive Safety Committee:** ensures that strategies and programs are reviewed prior to discussion at the Safety and Risk Committee and also provides a forum for learning across lines of business and continuous improvement associated with the approved strategies.
- **Line of Business Safety Councils:** executes plans to reduce and eliminate exposure to possible safety incidents. The Councils are composed of management, union and grassroots team members. 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 safety-first culture.
- **Enterprise Safety Working Team:** reviews enterprise-wide plans to reduce and eliminate exposure to incidents and improve our culture. Comprised of representatives from the lines of business and safety organization, this team reviews and provides recommendations for initiatives to ensure we are providing proactive and consistent enterprise solutions to safety challenges.

Key safety leadership development and employee engagement initiatives include:

- **Safety leadership development for upper management (officers and directors):** an annual one-day workshop that creates alignment around safety leadership language, principles and practices.
- **Safety leadership development for managers and supervisors:** a series of six workshops over 18 months that teach practical skills related to safety leadership, injury prevention and protecting the public, employees and contractors. It also includes one-on-one in-field coaching and a 360-degree assessment that collects feedback and increases self-awareness. In 2016, we are expanding the workshops to union-represented crew leaders.
- **Integration across leadership development:** incorporating safety leadership into our suite of Leading Forward leadership development offerings.
- **Seeking employee feedback:** increasing the number of safety-related items in our employee engagement survey to better represent employees' sentiment and collect insights around building and maintaining a safety culture.
- **Further integration within our hiring process:** reviewing our current use of pre-hire tests that assess candidates' predisposition to follow safe practices and determining other jobs where this test may be used.

Moving forward, we will continue to use benchmarking and continuous improvement actions to evaluate the effectiveness of our safety efforts as we maintain an unwavering focus on creating a safety-first culture.



Public Safety

PG&E's work to keep the public safe spans from increasing technical training for our employees to strengthening the integrity of the infrastructure that we manage every day. We also actively collaborate with federal, state and local emergency response teams to improve coordination in the event of an emergency and dedicate a significant amount of our community investments to promote emergency preparedness in the cities and counties we serve.

Our Approach

Embedding Safety in Our Operations

Public safety is at the core of how we operate our business.

- **Gas Operations:** We are working across the board to strengthen our gas infrastructure and enhance our operations. Among other highlights, we became one of the first companies in the United States to meet the rigor of a new industry gold standard for pipeline safety and safety culture; completed another significant safety recommendation issued by the National Transportation Safety Board following the San Bruno accident by finishing the installation of 235 automatic and remote controlled valves; and broke ground on a new Gas Operations Technical Training Center.
- **Electric Operations:** PG&E's focus remains on reducing the incidences of downed wires in our service area, integrating the latest in technology to monitor our electric lines and improve our ability to respond more quickly to outages, and proactively managing vegetation surrounding our electric lines to protect the infrastructure and surrounding communities.
- **Energy Supply:** We remain strongly committed to the highest levels of safety, performance and security at Diablo Canyon. 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.

Emergency Preparedness

PG&E's 70,000-square-mile service area covers regions prone to earthquakes, wildfires, heavy rains and gusting winds. To prepare for major weather events and natural disasters, we have implemented an enterprise-wide Emergency Management Advancement Program (EMAP) to review and strengthen our catastrophic emergency response plans.

The program, led by our Emergency Preparedness and Response organization, focuses on:

- Clearly defined organizational structures, roles and responsibilities
- Restoration priorities that incorporate community needs to help customers begin returning to normal life
- 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
- Employees who are personally prepared for emergencies and ready to respond at home and at work

2015 Milestones

First Responder Collaboration and Assistance

PG&E prioritizes coordination and communication with police, fire and other officials during emergency situations 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 secured First Responder website where emergency officials can access training materials and gas transmission infrastructure information and maps.

Highlights from last year included:

- **Partnered to prepare for fire season.** PG&E electric operations field supervisors and superintendents met with the National Weather Service, CAL FIRE, California Office of Emergency Services, U.S. Forest Service, Bureau of Land Management and the National Parks Service. During the meeting, we shared our plans and learned of the threats to PG&E's infrastructure and facilities, allowing staff to better prepare and respond to fire danger in collaboration with outside agencies.
- **Used daily air patrols to help detect wildfires and assist state and local fire agencies with early fire detection and response to stop fires from spreading.** During the four months PG&E operated the flights as part of its drought emergency response, the patrols spotted 146 fires and in 25 instances were the first to report the fire to CAL FIRE or the U.S. Forest Service. Early detection of smoke or fire allowed fire agencies to quickly respond to accurate locations and put out fires before they spread.
- **Hosted nearly 700 training workshops** facilitated by our public safety specialists to better prepare firefighters, police, public works officials and other authorities to respond to emergencies involving electricity and natural gas. We also met with many of the fire departments in our service area with PG&E gas transmission or distribution facilities located in their region.



PG&E donates rapid response truck on anniversary of Napa quake

One year after a powerful earthquake shook homes and buildings in the city of Napa, residents, business leaders and other community members came together to commemorate the temblor and remember the lives changed and lost. At the event, PG&E donated a next-generation, emergency response pickup truck to the city's fire department and invited local residents to have a personal preparedness plan. PG&E also emphasized the value of partnering with local cities, counties and first responders in emergency response.

Community Outreach and Partnerships

We work collaboratively with community partners that share our focus on emergency preparedness. Examples include:

- **Announced the Better Together Resilient Communities grant program**, a shareholder-funded initiative that will invest \$1 million over five years to support local planning efforts to help better prepare for, withstand and recover from extreme events and other risks related to climate change, such as sea level rise, flooding, land subsidence, heat waves, drought and wildfires.
- **Continued our partnership with the American Red Cross**, contributing \$1 million to build safer, more disaster resilient communities across Northern and Central California. The donation was used to support the Home Fire Preparedness Campaign, a multi-year home safety program that will help save lives and enhance safety in underserved communities.
- **Awarded wildfire prevention grants to local Fire Safe Safety Councils**. The grants marked the third consecutive year PG&E partnered with local California Fire Safe Councils to fund shovel-ready projects. The money provided in 2015 was used to protect communities from wildfires in at least 18 high fire-risk counties by clearing brush and dead, dying or diseased trees.

Public Safety Awareness

Educating the public about working safely around our systems and facilities, and on how to stay safe during emergency events, remains a key element of our public safety strategy. Last year, this included:

- **Emphasized the importance of calling 811 before any excavation project**, with outreach around National Safe-Digging Month, California Arbor Week and National 811 Day. PG&E also urged the U.S. natural gas industry to increase contractor education and outreach about the significant safety risks associated with reckless digging and to step up enforcement of companies that don't follow the law.
- **Sponsored the 11th-annual California Day of Preparedness**. Hosted by the Governor's Office of Emergency Services, the event featured demonstrations by the Sacramento Certified Emergency Response Team, a swift water rescue by Sacramento County Sheriff's Drowning Accident Rescue Team, PG&E gas and electric safety demonstrations, and emergency response vehicles.
- **Supported CAL FIRE broadcast, print and billboard advertising** to make homeowners aware that bark beetles are killing millions of trees in California, which then become fuel for fire, and to educate residents on how to safely take action.
- **Joined forces to host an El Niño preparedness workshop** for Spanish-speaking residents, working in collaboration with the City of Santa Cruz, Santa Cruz Seaside Company, the American Red Cross and local agencies. Additionally, PG&E hosted El Niño preparedness media roundtables in the Bay Area, Sacramento and San Luis Obispo that featured the Red Cross and first-responders and a wires-down safety demonstration.
- **Conducted interactive electric and gas safety demonstrations** using a traveling display that allows instructors to show potential hazards associated with gas and electric facilities to students, youth groups, contractors, emergency personnel and customers. PG&E gas and electric professionals held more than 2,900 demonstrations in communities throughout our service area.

Cybersecurity

As we integrate more Internet-connected technologies into our electric system to create a smarter grid, the importance of cybersecurity continues to increase—for PG&E and our customers. In fact, the U.S. Department of Homeland Security has classified utility assets as a key resource and critical infrastructure for our national and economic security. 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 cybersecurity strategies and best practices.

Our efforts are led by an in-house Cybersecurity Team, headed by the Utility's Senior Director of Cybersecurity. This team of security and operations experts continuously identifies, evaluates and mitigates cybersecurity risks across the enterprise.

Identifying and evaluating cybersecurity risks revolves around understanding business processes and core enabling technologies, while providing ongoing monitoring of our infrastructure and external threat landscape. Once risks are identified and prioritized, we develop mitigation plans to ensure an acceptable level of risk exposure.

Cybersecurity training and awareness continue to be a major focus for all employees and contractors, with all PG&E employees required to take an annual information security and privacy awareness course. Leaders are subject to additional coursework to further integrate cybersecurity awareness into our culture.

Physical Security

PG&E is increasingly focused on the physical security of our assets and infrastructure. In 2013, gunshots caused extensive damage to PG&E's Metcalf substation near San Jose. Although no one was hurt and there were no customer outages as a result, we have worked collaboratively with agencies at the federal, state and local levels to enhance the security of critical substations across our service area.

Improvements underway at multiple substations include the installation of new barriers at the perimeter and shielding for certain equipment. We are also installing state-of-the-art security equipment designed to detect and deter a range of potential threats.

PG&E is also designing and installing physical security enhancements at certain gas facilities, similar to what is being done at multiple substations. In 2015, PG&E completed construction of a new Security Operations Center as a complement to physical security enhancements being made at electric substations, gas facilities and other sites. We expect to break ground on a larger center in 2016, designed to accommodate PG&E's physical security monitoring needs for years to come.

Measuring Progress

PG&E measures performances on a set of public safety metrics to track progress on goals set each year with continuous improvement in mind. In 2015, we improved in a number of areas, including our performance in repairing gas leaks and our average response time to gas and electric emergencies.

In addition, safety results continue to represent the largest portion of at-risk performance-based cash compensation, at 50 percent. Financial performance and customer service each represent an additional 25 percent.

Looking Ahead

Public safety remains a core value at PG&E. To maintain our focus on this crucial area of our business, we plan to continue to identify and prioritize assets to be upgraded or replaced, leverage emerging technology to maintain our international and industry certifications for gas safety and asset management, and work proactively within our communities and with first responders to improve emergency readiness.



Workplace Safety

For PG&E, safety is an around-the-clock commitment. Our dedication to safety can be seen in our operations, in our processes and procedures, and in how our employees and contractors perform every task, every job, every day.

Through an emphasis on increasing the technical skills of our employees in the field, the leadership abilities of those who oversee other employees and a continuous evaluation of our operations, our goal is to keep all of our employees and contractors safe.

Our Approach

PG&E employs a broad spectrum of workplace safety efforts with several key aspects:

- **Setting aggressive health and safety targets** to track and evaluate our performance.
- **Implementing a Corrective Action Program** in a number of our operational lines of business, allowing employees to identify and report potential safety hazards or equipment problems. Each issue is tracked until the appropriate corrective action is completed. The program includes a feedback loop so that employees who submit issues receive information on action taken as a result of their submission. Employees may also submit issues anonymously.
- **Continuing to improve our Motor Vehicle Safety Program** by adopting a phone-free driving standard so that all employees can maintain their focus on the road.
- **Integrating health and wellness into our safety organization** to allow for a more comprehensive approach to evaluating health and safety programs, such as our Industrial Athlete Program, that contribute to our employees' ability to work safely.

2015 Milestones

Employee Safety

Through our continuous efforts, PG&E has made significant strides in employee safety with a number of highlights:

- **Reinforced a “speak up for safety” culture.** We continue to take concrete steps to improve our culture so that every employee is empowered to speak up about safety without peer pressure and approach each task with a safety-first mindset. Safety is emphasized in employee communications, from all-employee messages to safety tailboards that are discussed when field personnel begin their workdays.
- **Rolled out the Corrective Action Program to additional lines of business.** We implemented the program in our Safety and Shared Services organization, giving employees an additional, anonymous option to report potential safety concerns. This followed years of success with the program at our Diablo Canyon Power Plant and a successful implementation in our gas organization, with use among employees continuing to grow.
- **Enhanced our Motor Vehicle Safety Program.** In addition to implementing a phone-free driving standard, we installed vehicle safety technology on about 1,000 vehicles, giving drivers audible alerts after hard breaking, hard acceleration and speeding deemed to be excessive. This helps alert drivers to at-risk behaviors to improve safety behind the wheel.
- **Enhanced focus on potentially serious incidents.** Through analysis of field observations, past incidents and near hits, PG&E has determined the work conditions that carry the greatest potential for serious injury. One module of our Safety Leadership Training teaches leaders how to identify workplace hazards when they perform field observations, reducing the risk of potentially hazardous conditions. PG&E is also incorporating prevention checklists into work processes to reduce potentially high-risk conditions.
- **Continued technical training for field employees.** Together, our gas and electric operations logged more than 38,000 student days through 128 web-based training courses on gas safety tasks and 225 instructor-led courses on electric safety tasks. This was in addition to a strong focus on safety leadership development.



Breaking ground on new Gas Training Center

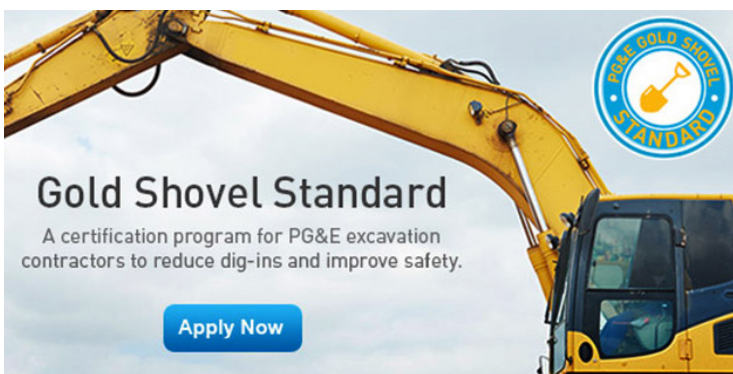
We broke ground on a state-of-the-art facility in Winters designed to train gas employees on best-in-class safety protocols, the use of new technologies and the highest levels of customer service.

Photo by David Kligman

Contractor Safety

We expect our contract workers to share the same commitment to safety excellence as our employees. To ensure that's the case, PG&E established a Contractor Safety Program that requires contractors to meet the program's prequalification requirements in order to perform work on behalf of PG&E. Nearly 800 contractors doing medium- and high-risk work have been assessed using a thorough safety review process.

In addition, PG&E has begun implementing oversight procedures for contractors and conducting oversight at job sites in the field and post-project evaluations as part of the Contractor Safety Program.



Certification program for PG&E excavation contractors

PG&E developed a first-of-its-kind excavation safety program—the Gold Shovel Standard—designed to ensure that contractors doing excavation work for PG&E demonstrate a commitment to safe digging, including calling 811 before any excavation work begins to have underground lines located and marked by utility owners.

Measuring Progress

PG&E uses two key metrics to measure our performance on workplace safety: the Lost Workday Case Rate and Serious Preventable Motor Vehicle Incident Rate (both defined below). In 2015, our Lost Workday Case Rate slightly improved over the prior year, but still fell short of our goal by 11 percent.

The table below provides complete PG&E employee safety statistics for 2013 through 2015:

SAFETY RESULTS FOR 2013 THROUGH 2015 (UTILITY)			
	2013	2014	2015
Total Lost Workdays ¹	22,541	22,371	23,463
Total Lost Workday Cases ²	76	86	87
Total Lost Workday Case Rate ³	0.346	0.376	0.372
Total OSHA Recordables ⁴	456	552	597
OSHA Recordable Rate ⁵	2.010	2.412	2.550

1. Total Lost Workdays is an internal PG&E metric that counts the number of workdays lost in the current year due to occupational injury or illness for all years of injury (current and all prior years).

2. Total Lost Workday Cases is the number of nonfatal occupational injury and illness cases that (1) satisfy OSHA requirements for recordability, (2) occur in the current year and (3) result in at least one day away from work.

3. The Lost Workday Case Rate measures how frequently new Lost Workday Cases occur for every 200,000 hours worked, or for approximately every 100 employees.

4. Total OSHA Recordables is the number of injuries and illnesses that meet OSHA requirements for recordability—those that (1) are work-related, (2) are new cases and (3) meet one or more OSHA general recording criteria.

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

The following table provides motor vehicle safety statistics for 2013 through 2015:

MOTOR VEHICLE SAFETY STATISTICS (UTILITY)			
	2013	2014	2015
Total Serious Preventable Motor Vehicle Incidents ¹	54	39	40
Serious Preventable Motor Vehicle Incident Rate ²	0.381	0.274	0.266

1. Refers to the number of serious preventable motor vehicle incidents that could have been reasonably prevented by the PG&E driver. Measures only those incidents considered to be serious, rather than all incidents that were otherwise preventable.

2. Number of serious preventable motor vehicle incidents that the driver could have reasonably avoided, per 1 million miles driven.

We also tracked the effectiveness of our vehicle safety technology. Of the three behaviors tracked (hard breaking, hard acceleration and speeding deemed to be excessive), we found a nearly 40 percent overall reduction in at-risk driving behaviors.

PG&E also introduced and actively tracks a number of leading—or predictive—indicators to help us more deeply embed safety in our operations and encourage employees to both speak up and seek treatment for injuries of any type. These include:

- Number of Corrective Action Program submissions
- Timely reporting of injuries to our 24/7 Nurse Report Line, which provides immediate access to trained medical professionals
- Number of near-hit reports submitted

Looking Ahead

PG&E will remain steadfast in our commitment to workplace safety, with a focus on three areas: developing our leaders by instilling safety as a core value through words, actions and behaviors; creating an environment that encourages everyone to speak up about safety issues; and controlling exposure to risks to prevent potentially serious safety incidents.

To that end, we plan to introduce the timely reporting of injuries to our 24/7 Nurse Report Line as one factor in at-risk performance-based pay. We also plan to prequalify our 2,500 subcontractors and fully implement the oversight procedures as part of our Contractor Safety Program.

In addition, we will develop a Safety Management System, a standardized framework for managing public, employee and contractor safety. We will use the system to ensure all policies, processes and organizational structures are aligned and executed consistently across PG&E. We will also perform regular third-party assessments of the system and require our senior leadership to review key system elements on a periodic basis.

Finally, based on a benchmark study of best-in-class technical training programs, we plan to refine our approach to how we govern, deliver and measure the effectiveness of our training.



Customers and Communities

PG&E's commitment to our customers starts with providing safe, reliable, affordable and clean energy. In today's evolving energy landscape, we are working more closely than ever with our customers to understand and meet their energy needs, provide cleaner energy options and enable individual energy choices. By supporting local economic vitality, we remain focused on helping the communities we serve grow and thrive to create a more prosperous California.

Key Sustainability Indicators

Number of homes weatherized through the Energy Savings Assistance Program:

100,573 homes

Percentage of overall spending with diverse certified firms in 2015, totaling \$2.5 billion:

44%

Highlights

Maintained our focus on improving the customer experience by relying on insightful data and our presence at the local level to anticipate and meet our customers' ever-changing needs.

Brought the total number of interconnected private solar customers to more than 250,000—and achieved one of the nation's fastest processing times to connect them to the grid.

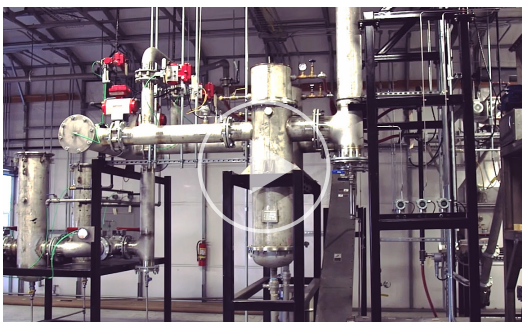
Launched Step Up and Power Down, an initiative to engage owners, operators and employees of downtown businesses in San Francisco and San Jose in a community-wide movement to reduce energy waste.

Helped save customers \$227 million on their energy bills and avoided the emission of nearly 1.2 million metric tons of CO₂ through our energy efficiency programs.

Proposed a new program to expand electric vehicle charging infrastructure which, if approved, will allow PG&E to deploy 7,500 Level 2 charging stations at commercial and public locations.

Contributed \$25 million to charitable organizations through our Better Together Giving Program—enriching educational opportunities, protecting our environment, advancing emergency preparedness, and supporting local economic and community vitality.

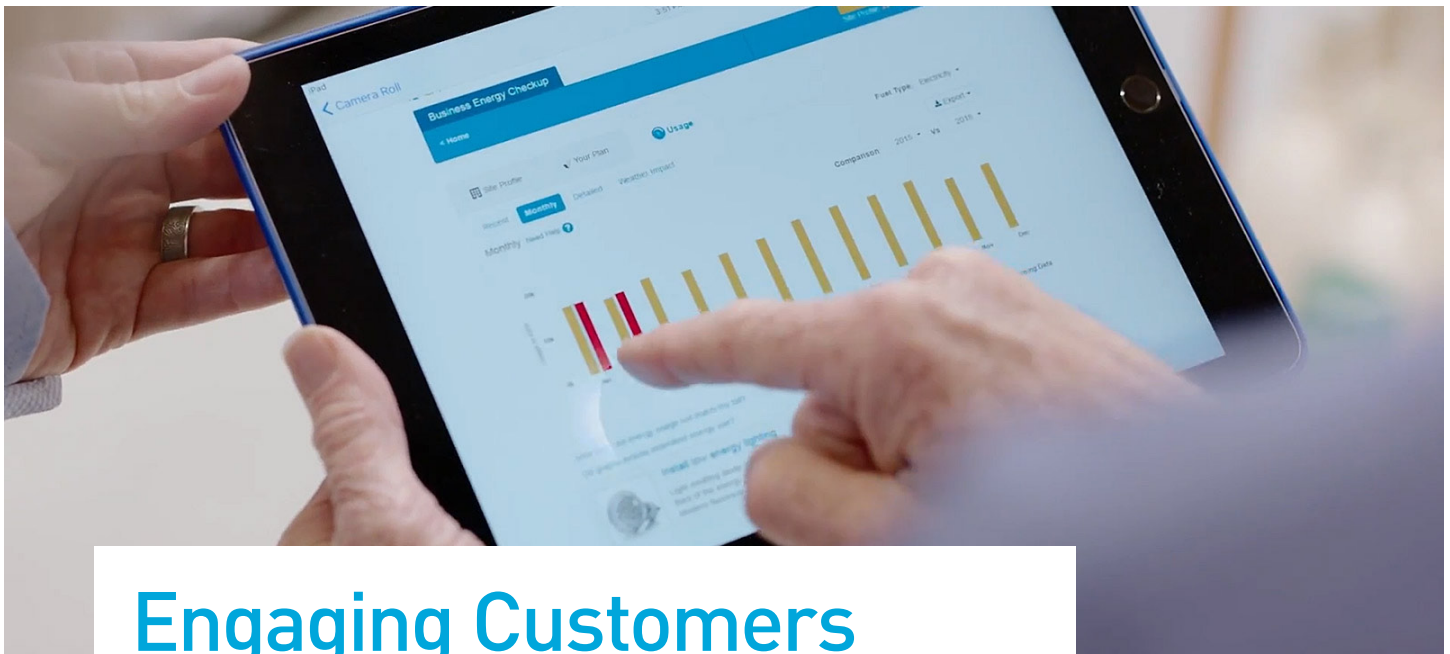
Achieved industry-leading supplier diversity results, helping thousands of businesses to grow and hire.



Collaborating on a low-carbon community microgrid

Blue Lake Rancheria, a Native American reservation in Humboldt County, is a long-standing partner for PG&E—from collaborating on energy efficiency to a new low-carbon microgrid. Funded in part through a California Energy Commission grant, the community microgrid will power facilities on the reservation and provide life, health and safety support.

Developed in partnership with Humboldt State University and others, the microgrid will be powered by a 0.5 MW solar photovoltaic installation, 950 kWh battery storage system, biomass fuel cell system and diesel generators.



Engaging Customers

From the Central Valley to Silicon Valley, from Eureka in the north to Bakersfield in the south, PG&E's customers are as diverse as the natural landscape of the Golden State.

We are proud to serve and reflect such diverse communities, and are increasingly relying on insightful data and our presence at a local level so that we can gain a deeper understanding of our customers' ever-changing needs and improve their overall experience with PG&E.

Our Approach

Pacific Gas and Electric Company's Customer Care organization, led by the Chief Customer Officer, is responsible for our efforts to deliver the best experience for each and every customer. This includes an increased focus on using data to improve the customer experience, localizing our presence and strategies in the communities we serve, empowering customers with greater choice and control over how they manage their energy use and continuously integrating customer feedback to improve our products and services.

Serving Customers Locally

To work more effectively at the local level, we maintain cross-functional leadership teams in each region to incorporate local needs and concerns into our operating decisions. These teams are led by local managers and include representatives from across the business.

Saving Customers Energy and Money

We continue to offer a full portfolio of savings options for customers, with an increasing focus on tips to help customers reduce their energy use and save money. We offer some of the nation's leading programs and incentives for energy efficiency,

demand response and solar energy, as well as simple rate options for charging electric vehicles. We also offer the Solar Choice program, which allows customers to buy up to 100 percent solar power.

Making It Easy

A growing number of our residential customers prefer self-service options. As we introduce new technologies to help customers understand, manage and reduce their energy use, we are increasingly reaching out to them through a variety of channels, including mobile phones, web, email and social media.

We provide the vast majority of customers with access to hourly data on their energy use and a comparison of their use to that of similar homes in their neighborhoods. Within our online tool in Your Account, customers can see how and when they use energy, take a home energy audit and find energy-saving tips, as well as information on our energy efficiency programs and incentives. PG&E's Business Energy Checkup enables small and medium business customers to find energy-saving ideas that can lower their operating costs and programs such as energy efficiency financing to address up-front cost barriers.

Our energy statements provide clear and easy-to-understand information, with numerous options for customers to pay their bills. We have also refreshed our online presence to include an improved and simpler navigation and site architecture and our mobile website so customers can get real-time outage information; start, stop or transfer service; or pay their bill on their mobile devices. Customers can also choose their preferred channel for communication—text, email or phone—and after nine months, they can use My Rate Analysis to make sure they're on the right rate.

In addition to digital offerings, PG&E offers self-service capabilities like reconnecting service via our Interactive Voice Response technology. Many of our communications are available in multiple languages and formats, including English, Spanish, Chinese, Vietnamese, Tagalog and large print.

Integrating Feedback

To increase customer satisfaction, PG&E regularly seeks feedback and insights from customers through various surveys, focus groups and other forms of research that help drive our decision-making and customer service improvements. We also maintain an internal hotline that allows any employee to elevate a customer issue and make sure that PG&E addresses it in a timely fashion.

2015 Milestones

We remained focused on meeting the unique needs of our customers in 2015, with a number of highlights:

- **Engaged local leadership teams.** We strengthened our local cross-functional leadership teams throughout our service area, allowing us to deepen local relationships and more quickly identify and resolve local customer concerns.
- **Improved the customer experience for digital-first customers.** We continued to improve PG&E's customer service infrastructure and technologies to enable more customers to self-manage their interactions and transactions with PG&E. In short, customers can now do business with PG&E via their Channel of Choice. This initiative was recognized as a best practice and received Chartwell's Silver Customer Service Award
- **Expanded customer data platforms.** We maintained a service called Share My Data, which allows the approximately 60,000 enrolled customers to share their energy usage data with select third-party service providers, who can use the information to advise customers if energy products and services, such as private solar, may be right for them.

Home Energy Reports stimulate big customer—and energy—savings

About 1.5 million PG&E residential customers receive easy-to-read Home Energy Reports. They show customers how their energy use stacks up against approximately 100 similar households in their area and provide personalized tips on saving energy. These comparisons encourage customers to manage their energy better. The savings enabled by the reports add up: In 2015, estimated electric savings totaled 145 GWh, enough to power about 9,000 typical homes for a year. Total estimated gas savings came to over 4.2 million therms, enough to serve about 2,500 typical homes for a year.

- **Continued strong growth of social media properties.** PG&E produces customer-centric content for social media properties on Facebook, Twitter, Instagram, LinkedIn and YouTube. In 2015, PG&E's social media platforms were essential real-time communication tools during large storms and events, like summer wildfires. Both customers and news media turn to our social channels and our news site at pgecurrents.com for updates from PG&E.
- **Improved outreach to diverse groups.** By deploying more in-language materials, increasing the number of in-language media opportunities and working with local organizations, we saw strong participation in our programs for low-income customers. For example, our CARE program, a discounted rate plan, achieved 87 percent participation by eligible customers.

Measuring Progress

Through a continued focus on improving the experience for our digital-first customers and tailoring our engagement and offerings based on local customer needs, we are committed to improving satisfaction for both residential and business customers.

MEASURING CUSTOMER SATISFACTION	
2013	75.4
2014	76.5
2015	75.5

In 2015, our customer satisfaction score decreased from 76.5 to 75.5, and we set a target for 2016 of 75.7. We recognize the need for continual improvement and are more focused than ever on communicating with customers about safety, our rates and the technologies and tools we have available to support sustainable customer energy solutions. We also benchmark our customer satisfaction results with best-in-class performing utilities using J.D. Power's Customer Satisfaction Studies. This comparison helps us set our goal each year as we aim for second-quartile performance.

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. This metric also serves as one of the measures we use for determining performance-related employee compensation, since employees from all PG&E lines of business contribute to improving the overall satisfaction of our customers.

Looking Ahead

As we work to create a better customer experience, we will continue to leverage sophisticated data and analytics, provide more self-service options for customers and make new technologies available to better tailor our services. Through the work of our local cross-functional teams, we will also continue to strengthen PG&E's local presence and relationships with customers and other stakeholders in our communities.



Customer Energy Efficiency

PG&E works with a broad spectrum of partners—from nonprofits to local government agencies to the private sector—to deliver innovative energy efficiency programs to customers. Our goal is to provide customers with energy-saving options that can be customized to fit their individual needs. And the results have been substantial: Over nearly four decades, PG&E's energy efficiency programs have helped avoid the release of more than 375 million metric tons of carbon dioxide (CO₂) emissions based on cumulative lifecycle gross energy savings.

Our Approach

California's Energy Efficiency Model

PG&E's energy efficiency programs play a key role in California's energy efficiency model. Since the 1970s, these measures have helped keep the state's per capita electricity consumption nearly flat while the rest of the nation's consumption has risen by 50 percent.

California continues to move aggressively to combat climate change and promote energy efficiency, most recently through the passage of SB 350 and AB 802, both of which PG&E supported. SB 350 doubles the state's energy efficiency goals by 2030, while AB 802 requires a new statewide building energy use benchmarking and public disclosure program.

In addition to this type of legislative and regulatory support, California's energy efficiency model includes:

- A "loading order," which makes energy efficiency the first preferred option for meeting new customer energy demand—ahead of renewable and conventional sources of energy
- Decoupling utility profits from energy sales, which enables PG&E to aggressively pursue energy efficiency without the disincentive of a financial loss
- Aggressive building codes and appliance standards that require Californians to build energy efficient homes and commercial buildings
- Ready availability of energy efficiency programs, training and strong customer participation

A Comprehensive Portfolio to Reach All Customers

One of PG&E's top priorities is to help our residential and commercial customers understand, actively manage and reduce their energy use. One way we do this is by supplying detailed usage data so customers can track their energy consumption throughout the month to better control energy costs. We also provide incentives to encourage customers to purchase energy efficient products.

Our Home Energy Reports show how a customer's energy use compares with similar homes in the neighborhood and offer savings tips and news about PG&E's energy efficiency programs and incentives. We also serve customers through partnerships with state and local governments, community partners and third-party energy efficiency specialists.

We reach customers through a variety of channels, from self-service software tools that provide customized energy insights to PG&E's seasoned business customer account representatives, who provide ongoing support for commercial and industrial customers of all sizes.

For example, customers can help ensure energy efficiency at home with a free Home Energy Checkup. This simple web-based assessment allows customers to find out how much of their household's energy goes to heating, hot water, appliances and lighting, and receive a customized list of tips to boost energy efficiency within their home.

Our energy efficiency priorities include:

- **Working to increase affordability of energy efficiency for residential, commercial and government customers.** We offer an energy efficiency financing program to address up-front cost barriers for commercial customers and government agencies. We also give money back directly to customers who buy energy efficient home appliances such as clothes washers and water heaters.
- **Collaborating with retailers, distributors and others to increase the availability of high-efficiency products.** We provide incentives to retailers for stocking, promoting and selling energy efficient products. Even small per-unit incentives can be significant to a retailer. We tap into a network of trade professionals who sell, install or service products, and partner with manufacturers and distributors by offering incentives for the sale of high-efficiency HVAC equipment.
- **Advocating for stronger building codes and appliance standards.** Since 1998, PG&E has been and remains an active member of a statewide team that has provided technical support for 114 building codes and 54 appliance standards in the state, as well as more than 100 federal appliance standards or test procedures.
- **Advancing Zero Net Energy (ZNE) design and technology.** We continue to prepare for a future of ZNE homes with our hands-on classroom, ongoing pilots and research, and technical assistance for architects and builders. California's goal is for all newly constructed residential and commercial buildings to be ZNE by 2020 and 2030, respectively.



Home upgrade program saves thousands of customers energy and money

More than 10,000 PG&E customers have completed the Energy Upgrade California Home Upgrade program and received more than \$27 million in total incentives to help offset the cost of energy efficiency upgrades.

The Home Upgrade program encourages homeowners to take a comprehensive, whole-house approach to energy efficiency to maximize savings, rather than making upgrades one at a time. Participating customers reduced their home energy usage by an average of 18 percent, with some customers saving as much as 63 percent.

- **Engaging communities through proactive outreach.** We actively partner with local governments, school districts and community-based nonprofits to offer energy efficiency solutions and reach out to communities to expand participation in PG&E programs. The foundation of this support is PG&E's network of local, regional and statewide government partnerships that implement energy efficiency and climate planning programs tailored to individual communities. We have served hundreds of cities, counties, small businesses and nonprofits, as well as thousands of low-income residential customers.

Education and Training in Energy Efficiency

At our three training centers, PG&E offers a variety of education and training programs in energy efficiency for building professionals, including architects, designers, engineers, contractors and technicians.

The Energy Training Center in Stockton, the Pacific Energy Center in San Francisco and the Food Service Technology Center in San Ramon offer specialized classes on topics such as residential building weatherization, constructing and maintaining energy efficient commercial buildings and energy performance in commercial kitchens. PG&E also offers a Tool Lending Library that loans building-measurement equipment at no cost to anyone working on short-term energy efficiency projects.

To provide these courses, the centers collaborate with community colleges, trade and professional organizations, state colleges and universities, community-based organizations and other training providers.

2015 Milestones

Our customer energy efficiency programs continue to increase affordability and promote economic growth. Highlights from 2015 include:

- **Expanded our energy efficiency financing program**, which provides for energy efficiency upgrades with no out-of-pocket costs and zero interest. By the end of 2015, the program funded more than 1,300 loans worth more than \$59 million. The majority of loans went to small- and medium-size businesses.
- **Launched the PG&E Simple Savings water-energy kit**, where PG&E provides customers with \$70 of energy efficient tools for \$10. Thanks to the 20,000 kits purchased, each household is estimated to save about 23.8 kWh, 13 therms and 3,920 gallons of water annually—the equivalent of 225 showers.
- **Expanded our program with retailers**, by piloting a program with ENERGY STAR staff and other gas and electric providers to bring energy efficient products to market. PG&E is now providing rebates on qualified models across five product categories at Home Depot, Best Buy, Sears and Kmart stores. This is an important step toward achieving California's goal for a 40 percent reduction in plug loads (energy used by products powered by a plug) by 2020.
- **Advanced ZNE building design and technology**, by piloting an integrated approach during the design and renovation of PG&E's Stockton Regional Office building. The building features a high-performance building shell, energy efficient lighting and daylight-responsive lighting controls, and solar panels that provide 30 percent of the building's energy use. We also achieved a 65 percent reduction in water use through drought-tolerant landscaping and rainwater harvesting. In addition, our onsite ZNE Display House will help us educate customers about residential and "beyond ZNE" building technologies.
- **Launched Step Up and Power Down**, an initiative designed to engage owners, operators and employees of downtown businesses in San Francisco and San Jose in a community-wide movement to reduce energy waste. The campaign seeks to save energy through participation in PG&E's energy efficiency programs and from everyday behavior changes. Within the first eight months, more than 800 businesses in San Francisco and San Jose pledged to reduce energy waste. Step Up and Power Down also launched three residential initiatives in partnership with the local governments of Redwood City, San Carlos and Woodland to engage residential customers and help them reduce unnecessary energy use.



Helping customers achieve big savings

Customers saved \$227 million on their energy bills through PG&E's energy efficiency programs in 2015. By participating in these programs, a typical PG&E residential customer saved \$60 to \$100 during the year, on average.

- **Introduced the PG&E Marketplace**, a one-stop online shop for all energy saving appliances and consumer electronics—including those that offer customers money back via a rebate for items such as clothes washers and water heaters.
- **Offered education and training.** PG&E helped architects and other building professionals gain new skills and expertise in energy efficient design and construction at our three training centers, holding 340 training sessions and providing more than 1,400 technical consultations.



Oroville food bank to save \$10,000 annually through energy efficiency

The North State Food Bank made lighting and refrigeration upgrades at its 10,000 square foot warehouse and office location using PG&E rebates—replacing 150 older, less-efficient fluorescent fixtures with energy-saving LED bulbs, creating a brighter and safer workplace. The improvements, which also included upgraded motors for walk-in refrigeration, will reduce the food bank's energy usage by about 52,000 kilowatt hours per year—the amount of energy used by seven average homes annually—and save about \$9,900 a year.

Photo by Paul Moreno

Measuring Progress

PG&E exceeded the California Public Utilities Commission's (CPUC) energy savings goals for 2015, achieving savings of 1,392 GWh, 295 MW of peak load and 23.4 million therms. These results helped save customers \$227 million on their energy bills and avoided the emission of nearly 1.2 million metric tons of CO₂—equivalent to taking over 250,000 cars off the road for one year.

ANNUAL ENERGY SAVINGS¹ FROM CUSTOMER ENERGY EFFICIENCY PROGRAMS

	2013	2014	2015
Megawatts (peak)	160	164	295
Gigawatt Hours (total)	826	845	1,392
Million Therms	31	29	23

1. Annual energy savings refer to the first-year impacts associated with installed customer energy efficiency projects. All data is as filed with the CPUC in PG&E's Energy Efficiency Program Portfolio Reports.

ANNUAL AVOIDED EMISSIONS¹ FROM CUSTOMER ENERGY EFFICIENCY PROGRAMS

	2013	2014	2015
CO ₂ Avoided (metric tons)	721,569	776,851	1,198,636
NO _x Avoided (tons)	213	211	229

1. Annual avoided emissions refer to the first-year impacts associated with installed customer energy efficiency projects. All data is as filed with the CPUC in PG&E's Energy Efficiency Program Portfolio Reports.

Looking Ahead

PG&E's ongoing commitment to energy efficiency programs and policies will continue to support California's standing as the national leader in energy efficiency. We are always looking for opportunities to do more to increase our impact, explore new partnerships and engage our customers.

For example, in 2016, we will continue to engage on the water-energy nexus—hosting seminars on model water efficient landscape ordinances, supporting a Zero Net Energy-Zero Net Water conference with the Society for Building Science Educators and offering our annual Water Conservation Showcase.

In addition, we will introduce two additional product categories and additional retailer chains in 2017 as part of our program with ENERGY STAR and retailers. In partnership with Habitat for Humanity, we will dedicate a ZNE home in 2017 and begin monitoring and documenting a full year of its performance. We will also promote ZNE through a commissioning class about the Stockton Regional Office and a ZNE display house iPad experience app.



Demand Response

When demand for electricity is high, PG&E's wide-ranging demand response programs help relieve pressure on the grid and save customers money with incentives to reduce their energy use or shift it to another time.

Our Approach

SmartMeter™ technology powers PG&E's demand response options and 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, allowing us to take a more sustainable approach to balancing energy supply and demand.

More than 250,000 residential customers participate in the programs we offer, along with many 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 nine to 15 “SmartDays,” when their rates are higher because demand for electricity is high. In 2015, 145,000 customers participated in SmartRate and provided an average load reduction of nearly 40 MW per event day.
SmartAC	Sends a signal to a PG&E-provided device on a customer’s air conditioner, cycling the air conditioner to use less energy. Offered during May through October, the program’s 150,000 participants can provide about 90 MW of load reduction across PG&E’s system when needed.
SmartRate + SmartAC	Roughly 35,000 customers were enrolled in both SmartRate and SmartAC in 2015. PG&E automatically cycles the air conditioning systems of these customers during SmartDay events by controlling their SmartAC devices, helping customers avoid higher SmartDay prices.
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” (nine to 15 per year) and times. In 2015, over 150,000 customers participated in Peak Day Pricing for the first time. The retention rate over the full season was nearly 90 percent.
Aggregator Managed Portfolio and 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 days.
Base Interruptible Program	Enables participating customers—typically large customers—to receive financial incentives in exchange for their commitment to reduce energy usage during emergencies to help ensure grid reliability.
Demand Bidding Program	Offers incentives to businesses for reducing energy usage during hot days. Unlike some other programs, this is a “best effort” program that gives customers incentives for reducing their usage but does not apply additional charges if they opt out on any given day.
Automated Demand Response (AutoDR)	Helps customers identify specific ways to reduce electricity use during peak demand periods and provides funding for equipment that—after receiving a signal from PG&E—initiates a series of automatic, customer-defined and pre-authorized demand reduction measures.

2015 Milestones

In 2015, we leveraged our programs on numerous occasions to reduce demand and ensure reliable electric service for customers.

We continued to transition eligible small- and medium-sized agricultural customers to Peak Day Pricing rates during 2015, following the transition of similarly sized non-agricultural customers. Over 200,000 small- and medium-sized customers are now enrolled.

We also continued to provide online tools, programs and services to help businesses thrive with critical peak pricing. Customers can log in to our website to see a custom rate comparison and learn more about available pricing options.

In addition, we launched a supply-side pilot program that will continue through 2016 through which participants define when, how much and at what price they are willing to reduce their energy load. This differs from traditional demand response programs, where PG&E signals when to reduce electricity use.

Participants in the pilot receive a monthly payment and can also earn money by selling their electric demand reduction into California's wholesale energy market. Using a variety of technologies—including energy storage; electric vehicles; heating, ventilation and air conditioning; and solar—participants delivered a total load reduction of about 1 MW. The pilot was recognized by DistribuTECH as one of the top utility demand response and energy efficiency projects for 2015.

Measuring Progress

Through our demand response programs, PG&E and our customers had the ability to provide up to 556 MW of load reduction in 2015—about the capacity of a large conventional power plant.

Looking Ahead

PG&E will continue to offer programs that enable our customers to shift energy usage when needed, helping to lower costs and benefit the environment. Through new data platforms, programs and pilots, we will continue to partner with third parties to deliver innovative products and services that help ensure the reliability of the energy grid.

For example, a new two-year demand response auction mechanism pilot enables California's investor-owned utilities to procure demand response services from third parties via a competitive auction. These third parties offer innovative services and tools that incentivize customers to participate in programs that reduce energy usage.



Solar and Distributed Generation

Each month, PG&E brings online an average of 6,000 new private solar systems, with more than 250,000 solar customers now connected to the energy grid. That figure accounts for more than one quarter of all rooftop solar systems in the United States—and customer interest continues to grow.

We are proud to partner with businesses and households who want to use solar energy. PG&E sees a future in which innovative energy technologies allow customers to have more choice and control over what type of energy they use and their overall energy usage, and we are making investments now that support higher levels of distributed energy resources, including solar, battery storage and electric vehicles.

Our Approach

PG&E remains committed to expanding the use of clean energy options that meet customer energy needs, as well as California's environmental goals, in a smart and meaningful way. We are working to promote a shared understanding of the value provided by a connected grid while supporting new energy policies that allow for the continued growth of clean and affordable energy for all of our customers.

PG&E supports customers who want to use solar energy and other distributed energy resources with a variety of tools and resources. Our website provides customizable information that helps customers determine if solar is right for them and offers incentive programs for private solar, solar water heating, fuel cells, wind, battery storage and other advanced technologies.

PG&E also offers online resources and tips for customers as they consider solar for their home at www.pge.com/solar, including:

- Ensuring energy efficiency at home before going solar
- Estimating costs of installing solar and potential bill savings with PG&E's solar calculator
- Finding a contractor
- Receiving bids from at least three solar vendors
- Exploring different financing options
- Monitoring and maintaining the solar system after installation

PG&E sends an interactive welcome kit to guide customers through their first year of going solar, including an explanation of how their solar bill works. PG&E follows up with targeted communications at key times throughout customers' initial year. A dedicated solar service center provides knowledgeable and specialized customer service representatives to answer questions at any point in the solar adoption process. Additionally, an easy-to-use online portal allows solar customers to track their charges and credits throughout the year and tally how much money they have saved.

Incentive Programs

PG&E currently offers three types of solar and distributed generation incentive programs for customers:

- **PG&E's California Solar Initiative-Thermal program** provides rebates to single-family and multi-family residential projects as well as commercial customers who install eligible solar water heating systems that offset natural gas for their home or business. The program will run through December 2017 or until the budget of \$205 million is exhausted, whichever occurs first.
- **PG&E offers solar photovoltaic (PV) incentives** for single- and multi-family affordable housing, and customers can also apply for incentives for new energy efficient homes that install solar.
- **PG&E's Self-Generation Incentive Program** provides incentives for customers to implement other advanced on-site generation and/or storage technologies, such as fuel cells, wind turbines, combustion engines and advanced energy storage systems. The goal of the program is to reduce peak load and greenhouse gas emissions for participating customers.

2015 Milestones

In 2015, PG&E continued its strong support for solar and other clean energy technologies. Examples of our efforts include the following:

- **Supported customer solar water heating.** We provided average incentives of about \$2,000 to single-family residential solar water heating projects and more than \$30,000 on average for multi-family residential and commercial installations. These incentives have helped support over 1,100 gas-offsetting projects of all types since the program's inception, which, in total, are expected to avoid over 1.5 million therms annually.
- **Supported other customer self-generation.** We allocated an estimated \$40 million to customer projects that will install approximately 30 MW of distributed generation, such as fuel cells, wind turbines, internal combustion engines and advanced energy storage systems.
- **Continued to improve the customer experience.** On average, PG&E connects a new private solar system to the energy grid in less than three days. This is one of the fastest processes in the United States and compares to an industry average of four weeks. We've also enhanced the experience for new solar customers with a welcome kit, redesigned bill and online resources.



For 11 years, PG&E's Better Together Solar Habitat program has provided more than \$10.6 million to help respond to the housing needs of families in our service area. As the exclusive solar partner of Habitat for Humanity in Northern and Central California, PG&E has funded the installation of solar on more than 700 Habitat for Humanity homes in our service area.



Supporting clean energy at The Marine Mammal Center

The Marine Mammal Center is a nonprofit rescue and rehabilitation facility for sick and injured sea lions, seals and other mammals. Open to the public, they provide education and inspire action to protect the oceans. See how PG&E supports their sustainability mission by helping them to go solar and to install electric vehicle charging stations.

- **Raised customer awareness of solar power and other generation technology options.**
We offered a wide range of training opportunities on solar and other technologies for different audiences and education levels, both online and in the classroom. We held 42 solar classes in 2015 with more than 1,000 attendees in total.

Measuring Progress

Midway through 2016, we surpassed 250,000 interconnected solar systems—representing 25 percent of all private solar in America—a significant milestone for PG&E, the solar industry and our customers.

PG&E INTERCONNECTED CUSTOMER SOLAR SYSTEMS			
Total Solar Interconnections = 250,000+			
1993 – 2000	158	2009	9,186
2001	565	2010	10,403
2002	1,228	2011	13,610
2003	1,815	2012	17,440
2004	3,100	2013	28,490
2005	2,791	2014	45,194
2006	4,326	2015	68,171
2007	6,492	2016 ¹	35,801
2008	6,486		

1. Total through June 30, 2016.

Solar water heating education and workshops

PG&E workshops help educate solar water heating contractors and the public about thermal technology and details of the California Solar Initiative-Thermal program:

- *Solar water heating basics, which provides an overview of the various technologies*
- *Solar water heating systems for homeowners, which covers the design, specification and installation of systems for residential applications*
- *Solar water heating-advanced commercial systems, which focuses on large-scale systems for commercial applications*
- *CSI-Thermal workshop, which is required for becoming an eligible installer with the CSI-Thermal Program*

Looking Ahead

The future looks bright for clean distributed energy technologies like private solar, providing customers with additional options that help them save money and use renewable energy. PG&E is committed to supporting customers who are interested in going solar, and we look forward to working with our stakeholders to make it easier to adopt solar and other distributed technologies in a sustainable way.

PG&E is focused on building a flexible energy grid capable of seamlessly integrating all forms of clean technology needed to reduce our carbon footprint—a vision we call the Grid of Things™. Clean energy sources become more valuable by connecting to the grid, much like how a smartphone is more valuable when it's connected to a network or the internet. With a modern, resilient, dynamic energy grid, we can bring clean, carbon-free energy to everyone, offering our customers more choices, more control and more convenience when it comes to their energy.

To realize this potential, PG&E advocates a forward-looking energy policy that supports evolving rate structures to compensate both energy companies for the grid services we provide to customers and customers for the value they bring to the grid. We look forward to working with regulators, customers and other stakeholders to develop new models that support a future when customers will use the energy grid as a system to complement the new energy technologies they have in their home.

Employee Solar Discount Program

In 2015, PG&E provided a \$1,000 incentive for employees that installed solar for their home.



PG&E offers new clean energy program

PG&E's Solar Choice extends the option for solar to our residential and business customers who aren't planning to install rooftop solar panels.

Approximately half of U.S. households and businesses are unable to install rooftop solar due to space, lack of sun exposure or ownership limitations. For a modest charge, residential and business customers can purchase up to 100 percent of their power from solar energy, regardless of their location. As the program develops, the solar energy purchased by customers will be sourced from new solar projects built by developers across PG&E's service area.



Plug-In Electric Vehicles

California has more than 200,000 plug-in electric vehicles (EVs) on its roads, and PG&E is committed to making ownership easy and affordable. With one in five of the nation's EVs plugging in to PG&E's energy grid, we are helping customers and communities understand the benefits of driving electric while working to enable the large-scale electric infrastructure needed to meet demand for EVs and California's clean air and greenhouse gas emission reduction goals.

Our Approach

PG&E is working proactively to make California a leader in EV adoption by educating customers about the benefits of the vehicles, offering electric rate plans tailored for EV use and upgrading our electric infrastructure to accommodate their widespread use.

Examples of our work include:

Our proposal before the CPUC to deploy EV charging stations throughout our Northern and Central California service area.

- Piloting cutting-edge programs to promote the adoption of EV charging rate plans, including our work with BMW on demand-response smart-charging for EV owners to delay charging when energy demand peaks.
- Active community outreach through participation in events, including Charge Across Town's EV Week, Drive the Dream and the San Francisco International Auto Show.

We are also participating in California's Low Carbon Fuel Standard (LCFS) program, which aims to lower the carbon intensity of California's transportation fuels by 10 percent by 2020. Through this program, PG&E generates emissions credits when customers charge their EVs or purchase compressed natural gas (CNG) for their

PG&E's EV rate makes the cost of charging equivalent to about \$1 a gallon.

vehicles, since both electricity and CNG are cleaner transportation fuels than gasoline or diesel. Under regulatory oversight, PG&E sells these credits to LCFS-regulated parties and then returns the revenue from these credit sales to our EV and CNG customers in the form of rebates.

2015 Milestones

Highlights of our work to transition customers to EVs include:

- **Proposed to expand charging infrastructure.** PG&E proposed a new program with the CPUC to deploy EV charging infrastructure in our service area. Phase 1 of this program, if approved by the CPUC, would allow PG&E to deploy 7,500 Level 2 charging stations at commercial and public locations, including multifamily dwellings and workplaces, with 15 percent in disadvantaged communities. The program will also support statewide EV travel by installing 100 DC fast chargers.
- **Participated in more than 10 events across our service area to educate customers about the benefits of EVs.** This included Drive the Dream 2015, which brought together business leaders, including PG&E Corporation's Chairman and CEO, with California's governor to showcase the latest EVs and commitments from California businesses to grow EV adoption within their fleets and employees.
- **Piloted new technologies for submetering EV charging.** Launched in 2014, the pilot allows residential and commercial customers to install a third-party submeter to measure their EV charging usage, so that customers can have their EV charges billed at a different rate than their home or business usage. In 2015, more than 100 customers participated.



Connecting with customers

PG&E participated in the San Francisco International Auto Show, displaying locally made plug-in hybrid PG&E fleet vehicles and sponsoring EV test drives.

Providing employee incentives

PG&E encouraged employees to make the switch to EVs through a dedicated program. Working in partnership with Ford and General Motors, the program helped more than 700 employees purchase EVs, many of which are charged at PG&E facilities via our workplace charging program.

Measuring Progress

The number of EVs in PG&E's service area continued to increase in 2015, with battery and plug-in hybrid EV ownership reaching 78,490 vehicles. PG&E expects that by 2020, our customers will own and operate approximately 226,000 plug-in vehicles.

PLUG-IN ELECTRIC VEHICLES IN PG&E'S SERVICE AREA ¹					
	2011	2012	2013	2014	2015
Approximate Number of EVs	3,224	11,565	30,348	57,772	78,490

1. Electric Power Research Institute, R.L. Polk Data, 2015.

Looking Ahead

With EV ownership accelerating across California, PG&E remains focused on designing programs that meet customer needs and promote EV adoption.

Our EV charging infrastructure and education program, if approved by the CPUC, would represent a significant increase in deployment of EV charging stations and help meet state clean air and greenhouse gas emission reduction goals. By supporting market acceptance of EVs, the program would create new opportunities for other infrastructure and technology companies, help keep California at the forefront of EV innovation and create new jobs in local communities. Pending regulatory approval, PG&E looks to begin deployments in 2017.



Energy Affordability

As PG&E invests in our energy systems to make them safer and more reliable, we are also mindful of the importance of keeping service affordable for customers. PG&E's average residential bill remains below the national average, thanks in part to our energy efficiency programs, which help customers save money by reducing their energy use. We also work closely with customers who are facing financial challenges.

Our Approach

We take a multipronged approach to keep our energy services affordable for customers throughout our service area.

Saving Money through Energy Efficiency

PG&E's suite of energy efficiency programs plays an essential role in energy affordability. Our website includes an extensive set of energy-saving tips and lists of appliances and equipment that are eligible for rebates, as well as opportunities to upgrade the entire home. It also provides tools like the Home Energy Checkup and Home Energy Reports that help customers analyze their usage and pinpoint ways to save.

PG&E helped customers save \$227 million on their energy bills through energy efficiency programs in 2015.

PG&E also provides customers with a number of rate plans so they can choose the option that best fits their needs. The SmartRate™ plan enables customers to save money by conserving power during as many as 15 SmartDays™ each summer, when their rates are higher because demand for electricity is high, receiving in exchange a reduced rate during certain months of the year. Customers who sign up for the SmartAC program receive a \$50 incentive and free AC Check Up for participating in this easy and automated program that helps prevent power interruptions during high-usage times like the hottest summer days. And more broadly, time-of-use rates enable customers to save money by reducing and shifting some of their usage to lower cost off-peak times of day.

Helping Customers in Need

In addition to our energy efficiency efforts, PG&E works closely with customers facing financial challenges so that they continue to receive gas and electric service. Programs designed for those in need include:

- The California Alternate Rates for Energy (CARE) Program, which offers a monthly discount on energy bills for income-qualified households and housing facilities. Qualified households can save 20 percent or more on their bills.
- Balanced Payment Plans, which spread costs out evenly over the year and eliminate swings in customers' monthly energy bills caused by seasonal-related changes in usage.
- The Relief for Energy Assistance through Community Help (REACH) plan, which provides emergency energy assistance of up to \$300 to low-income customers experiencing a crisis that prevents them from paying their gas or electric bill. This one-time assistance program, funded in part with charitable dollars from PG&E's shareholders, is administered by The Salvation Army.
- The Family Electric Rate Assistance Program (FERA), which provides a monthly discount on electric bills for income-qualified households of three or more people.

In addition, discounts are available for customers with medical conditions that may prevent them from paying their bill on time or regularly.

Providing Assistance to Businesses

We actively partner with local, regional and statewide economic development organizations in a variety of ways, from providing funding to nearly 50 organizations to having employees serve in leadership roles on boards of directors and organizing local economic forums and training programs.

PG&E's economic development team provides one-on-one assistance to current and future commercial customers who are considering competing locations inside or outside California. The team directly supports local efforts to attract, retain and grow companies by helping them analyze and lower their energy costs through a variety of programs.

We also continue to develop new offerings to help businesses grow or maintain jobs in California, such as our Economic Development Rate for eligible customers with high energy loads who are considering locating in California, relocating from California to other states or closing their existing California operations. Eligible companies can receive a 12 percent rate reduction for five years, and companies in cities and counties where the annual unemployment rate is at least 25 percent higher than the state average can receive a 30 percent rate reduction for five years.

2015 Milestones

To help keep customer energy bills affordable, we continue to adopt more efficient work methods and technologies. This includes streamlining procedures and processes, allowing leaders to more effectively implement strategies to serve our customers. One example is the advanced automation technology installed on power lines throughout our service area that can "self-heal" the power grid by rerouting the flow of electricity around a damaged power line and effectively restore power to the majority of impacted customers within minutes. This allows PG&E field crews to be deployed more efficiently.

In 2015, we continued to aid customers in need through our financial assistance programs:

- **CARE:** Over 1.4 million customers, or 87 percent of those who were eligible, received discounts through the CARE program in 2015. Since the program's inception in 1989, PG&E CARE customers have saved \$7.5 billion on their energy bills.
- **REACH:** PG&E provided over \$1.7 million to help more than 6,300 customers through the REACH program in 2015.
- **Balanced Payment Plans:** Approximately 239,000 customers took advantage of various balanced payment plan options in 2015, which helped even out the highs and lows of monthly bills.

We also continued to contribute to local economic and community vitality:

- We invested in our communities through our Economic Vitality Grant Program, which supports local workforce development and business incubation. In 2015, we awarded 10 grants totaling \$200,000 to help organizations such as Northern Rural Communities Development Inc. to support its Grow Manufacturing initiative and expand the California North State manufacturing sector.
- We partnered locally for economic development with the Governor's Office and the California Association of Local Economic Development—hosting four economic development workshops in local communities, among other actions.
- We helped attract or retain key local businesses—working with 51 businesses that were looking to locate or expand in our service area when they had out-of-state options. Of these, PG&E was successful in attracting 16 companies within our service area with an associated 3,600 jobs.

We also continued to enable and support energy savings through a suite of energy efficiency options, different rate plans, demand response options and engagement campaigns to help customers save energy and money.

Measuring Progress

PG&E's Energy Savings Assistance Program, an income-qualified program, helps 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 help customers reduce water use.

WEATHERIZED HOMES THROUGH ENERGY SAVINGS ASSISTANCE PROGRAM			
2007	63,319	2012	115,229
2008	61,034	2013	123,566
2009	81,308	2014	123,539
2010	133,329	2015	100,573
2011	128,071	2016*	100,000

*Projected

Average PG&E residential bills for gas and electric service are among the lowest in the nation, according to figures compiled by leading trade associations.

PG&E's residential electric customers paid less than the average of nearly every region in the country in 2014, the most recent year for which comparative data are available. Their average bill of \$85.20 per month was 19 percent less than the national average of \$105.17.

The average PG&E residential gas customer paid \$38.95 per month, which was 40 percent less than the national average of \$65.33.

AVERAGE MONTHLY ELECTRIC BILLS (2014)	
U.S. Average	\$105.17
PG&E	\$85.20
Pacific	\$91.49
East North Central	\$93.09
Middle Atlantic	\$94.54
Mountain	\$96.04
West North Central	\$100.19
New England	\$100.23
West South Central	\$126.07
South Atlantic	\$126.81
East South Central	\$132.54

Source: Edison Electric Institute

AVERAGE MONTHLY GAS BILLS (2014)	
U.S. Average	\$65.33
PG&E	\$38.95
Pacific	\$39.42
Mountain	\$49.92
West South Central	\$50.92
East South Central	\$60.58
South Atlantic	\$65.33
West North Central	\$74.33
East North Central	\$84.17
Middle Atlantic	\$86.75
New England	\$106.58

Source: American Gas Association

Looking Ahead

The way Californians are being charged for energy is changing. PG&E has been working with regulators, state officials and other stakeholders to more closely align the price customers pay for energy with the actual cost of providing that energy and to encourage residential customers to shift usage to times of day that support a cleaner, more reliable grid.

This effort is part of a multiyear path toward simplifying the rate structure. In 2016, we put into place a number of residential rate changes that affect the way our customers pay for energy, including moving from a four- to three-tier rate structure and balancing the tiers by adjusting the price of each tier. Other steps included establishing two new time-of-use rate options for customers.

Energy efficiency and other programs will remain at the heart of our efforts to help customers save money on their bills, including our CARE, REACH and Energy Savings Assistance Programs.

PG&E, community leaders support Kiva Oakland to help small businesses

PG&E partnered with the city of Oakland, community leaders and Kiva.org to launch Kiva Oakland, a new program that helps fund small businesses, create jobs and support Oakland's economy and future for the next generation. Kiva is a nonprofit organization that connects small businesses with a global community to crowdfund loans in order to alleviate poverty and expand economic opportunity. Kiva's micro-lending program leverages the funding power of an online network to invest in local small businesses that are often denied loans through traditional banks. These micro-loans can help small business owners start and grow their businesses.



Community Investments

As a business partner and community member, we start with the simple belief that we are better together. Throughout the year, PG&E and our employees strengthen the communities where we live and work—providing educational opportunities, protecting and conserving the environment, advancing emergency preparedness and supporting local economic vitality.

Our Approach

As part of our ongoing commitment to local communities, PG&E provides grants that support 501(c)(3) nonprofit organizations, schools and local governments across Northern and Central California every year. Our Better Together Giving Program focuses on four areas: education, economic and community vitality, the environment, and emergency preparedness.

In 2015, we provided more than 1,600 grants in these areas, with a special focus on supporting underserved communities. We also prioritize partnerships that provide volunteer opportunities for our employees, and often make in-kind contributions to organizations such as vehicle donations and surplus equipment and tools.

PG&E's community investment program is funded entirely by shareholders and has no impact on our customers' electric or natural gas rates.

PG&E also offers several ways for employees to direct the community investment process on a local level:

- Our Community Service Award program allows employees who log more than 25 volunteer hours to direct \$350 to the qualifying nonprofit organization of their choice.

2015 CHARITABLE CONTRIBUTIONS

Category	Percentage
Education	32%
Economic and Community Vitality	42%
Environment	17%
Emergency Preparedness	9%

For the fourth year in a row, Pacific Gas and Electric Company earned a spot on the Civic 50 as one of America's most community-minded companies. The list highlighted the S&P 500 corporations that best use their time, talent and resources to improve the quality of life in the communities where they do business.



- Each of PG&E's 10 Employee Resource Groups (ERGs)—representing PG&E's diverse workforce—is given the opportunity to direct \$10,000 to community groups and activities.
- Our Matching Gifts Program enables PG&E to match eligible gifts dollar-for-dollar up to \$1,000 per calendar year per employee, retiree or current member of the PG&E Corporation Board of Directors.

2015 Milestones

Our Better Together Giving Program is making a difference in the lives of our customers and in the communities we serve. Here are highlights from our focus areas in 2015.

Education

To give the current and next generation of Californians more opportunities to learn and succeed, PG&E awards scholarships and grants to help further studies in science, technology, engineering and math (STEM). Highlights from 2015 include:

- **Better Together STEM Scholarships.** We awarded 10 students with a \$100,000 scholarship (up to \$20,000 per year for five years) and 90 students with a one-time \$2,000 scholarship. Since its inception, PG&E's Better Together STEM Scholarships have committed \$3 million in scholarships ranging from \$2,000 to \$20,000 to 400 students throughout Northern and Central California.
- **Solar Suitcase.** A total of 19 Northern and Central California schools were selected to participate in the inaugural year of the PG&E Solar Suitcase program, part of our Better Together Classroom Grants. Under the program, students built portable solar units, participated in local sustainability projects and shared the solar suitcases with students in Kenya. Our program partner, We Share Solar, trained teachers on how to assemble the suitcases so that students can learn the basic principles of clean energy technical education.
- **Better Together Energy Academy.** More than 100 high school students successfully graduated from a Better Together Energy Academy, with nearly 80 percent planning to attend a community college or four-year university. In 2015, PG&E introduced a bridge option for Sacramento-based Energy Academy students to attend PowerPathway™, serving as the next step in creating a true workforce development pipeline for PG&E's future employment needs. Participants enrolled in a 16-week pre-apprenticeship program in partnership with American River Community College and the Sacramento Employment and Training Agency. Students received career support counseling services and were paid a weekly stipend by PG&E.



Students act locally, think globally with solar suitcases

Through PG&E's Solar Suitcase program, several students and teachers delivered solar kits to communities in Kenya and taught them how to use them. Solar Suitcases are small, portable photovoltaic lighting systems, powerful enough to illuminate a small room.

Economic and Community Vitality

To help create safe and thriving communities throughout our service area, we provide career training opportunities, support local businesses and offer energy assistance to low-income families. Highlights include:

- **Better Together Economic Vitality Grants.** As part of our broader charitable commitment to economic development initiatives, PG&E's Better Together Economic Vitality Grants invested \$200,000 in programs designed to boost local job creation and promote economic opportunity throughout our service area. Grants of up to \$20,000 were awarded for programs ranging from business development to workforce training.
- **Better Together Summer Jobs.** We committed over \$900,000 to PG&E's Better Together Summer Jobs, which we offer in partnership with local Boys & Girls Club chapters in Fresno, Sacramento and Bakersfield. In 2015, PG&E provided 210 youth with paid summer jobs and approximately 850 youth with workforce training. Since its inception in 2012, nearly 900 youth have received summer jobs and nearly 3,500 have received job training through the program.

PG&E donates \$1 million toward Oakland Promise education initiative

To promote education in a community where more than 70 percent of students come from low-income families, PG&E announced a donation of \$1 million in college scholarships over the next five years. The scholarships will be awarded annually to high-performing high school students who seek to go to college at any level.

- **REACH:** PG&E provided over \$1.7 million to help more than 6,300 customers through REACH™ in 2015. REACH (Relief for Energy Assistance through Community Help) provides emergency energy assistance of up to \$300 to low-income customers experiencing a crisis that prevents them from paying their gas or electric bill. This one-time assistance program, funded in part with charitable dollars from PG&E's shareholders, is administered by The Salvation Army.

Emergency Preparedness

PG&E partners with first responders and community leaders to promote community readiness in the event of an emergency, such as a wildfire or earthquake. In 2015, our efforts included:

- **Partners in Preparedness.** We launched a multiyear preparedness strategy that will transform disaster readiness levels in our communities in addition to supporting year-round disaster response efforts. The program is part of the American Red Cross Home Fire Preparedness Campaign, which aims to save lives lost due to a preventable cause: home fire.
- **Community Preparedness Support.** PG&E's financial support extended to numerous organizations, including local Fire Safe Councils, cities and school districts, disaster response agencies, police and fire departments, and neighborhood watch organizations. In all, PG&E donated more than \$1.6 million to support emergency preparedness in 2015.

Environment

PG&E's environmental commitment can be seen in our programs to promote renewable energy, foster energy efficiency and protect our parks, recreation areas and natural habitats. Recently offered programs include:

- **Better Together Solar Habitat.** Through this program, PG&E fully funds the installation of solar panels on every new Habitat for Humanity-built home in our service area. The program saves each family approximately \$500 a year on energy costs, avoids the emission of 132,000 pounds of carbon dioxide to the atmosphere over the 30-year life of the system and provides popular volunteer opportunities for our employees. For 11 years, PG&E's Better Together Solar Habitat has provided more than \$10.6 million to help respond to housing needs and bring solar energy to hardworking families with limited incomes.
- **Better Together Nature Restoration Grants.** Through our partnership with the National Fish and Wildlife Foundation, which supports community-based projects to restore natural habitats, we awarded over \$95,000 in grants to support restoration projects within our service area. Grants went to:
 - **Forebay Aquatic Center**—a restoration and clean water science ambassador project (Butte County)
 - **Waldo Holt Conservancy**—enhancing nature and community through education and environmental monitoring (San Joaquin County)
 - **Acterra**—a San Francisco peninsula stewardship project (Santa Clara County)
 - **EarthTeam**—a sustainable youth program creating green infrastructure through community-based urban forestry (Contra Costa County)

PG&E responds to communities in need

Following the devastating Lake and Butte Fires, PG&E gave grants totaling \$485,000 to 23 organizations, including the American Red Cross. In turn, the Red Cross was able to provide over 120,000 meals and snacks as well as 11,000 overnight stays in 12 local shelters. PG&E also distributed 750 relief kits that included items such as water, tents, toothpaste and more. Additionally, PG&E's ERGs donated \$14,000 to help PG&E employees impacted by the fires.

Measuring Progress

In 2015, PG&E contributed \$25 million to charitable organizations, representing 1.3 percent of our pretax earnings from operations from the prior year. This exceeded our 1.1 percent target and the benchmark of 0.93 percent based on the median percentage of total giving from Fortune 500 companies.

PG&E's community investments 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 and transgender (LGBT) community. In 2015, approximately 82 percent of PG&E's community investments were directed toward these groups.

TOTAL CHARITABLE CONTRIBUTIONS		
Year	Charitable Contributions (millions)	
2009	\$19.2	
2010	\$19.3	
2011	\$23.2	
2012	\$23.2	
2013	\$23.2	
2014	\$23.2	
2015	\$25.0	

Looking Ahead

In 2016, PG&E expects to invest more than \$28 million in charitable funding to support underserved communities, with a particular focus on STEM education and support. This will include a new robotics program in partnership with FIRST (For Inspiration and Recognition of Science and Technology) to support, develop and engage students in hands-on STEM learning opportunities. We will also continue to strengthen the links between our community investments and our future workforce needs by partnering to provide students with internships and job-shadowing opportunities.



PG&E, environmental leaders support 'Yes On Measure AA for a Clean and Healthy Bay'

As part of our commitment to public safety, the environment and serving the community, PG&E Corporation made a \$250,000 shareholder-funded commitment to the People for a Clean and Healthy Bay Coalition. With this contribution, PG&E joined a growing list of local leaders in support of a successful measure to advance environmental restoration, pollution reduction and critical flood protection around the San Francisco Bay.

PG&E Corporation Chairman and CEO Tony Earley joined local leaders in support of environmental restoration, pollution reduction and critical flood protection around the San Francisco Bay.

Photo by Phillip Desmangles



Supplier Diversity

Building a diverse supply base is an essential aspect of our commitment to supporting economic development, job creation and diversity in local communities. For 35 years, PG&E has embraced working with diverse suppliers and small businesses as a core part of our business strategy: supporting our mission to provide safe, reliable, affordable and clean energy.

Our Approach

PG&E actively works to bring diverse business enterprises (DBEs)—small businesses owned by women, minorities, service-disabled veterans and LGBT individuals—into our supply chain. We also connect DBEs with other organizations to help grow their business and empower them to succeed in today's economy.

Our efforts include workshops and capacity-building training that, among other things, support safe, cybersecure, environmentally sustainable and thriving suppliers. All of this reflects how we prioritize diversity and believe in its power to improve our communities and enhance the quality and cost-effectiveness of our supply chain.

Championing Diverse Suppliers

Within PG&E, we conduct formal and informal supplier diversity training for employees. This includes our group of Supplier Diversity Champions, who play a key role within their line of business by setting diversity goals, sharing best practices and monitoring progress, with the direct support of senior leadership. In addition, PG&E's annual Supply Chain Responsibility Awards recognize employees who have made the largest impact on our diversity efforts.

More than 200 volunteer outreach ambassadors represent PG&E at various diverse business community events and share information about how to do business with PG&E.



PG&E honored by Minority Business News Magazine for supplier diversity

Minority Business News Magazine named PG&E Corporation Chairman, CEO and President Tony Earley to its 2015 Best of the Decade list. The award honors individuals who have been steadfast in their commitment to driving supply chain minority business development for a decade or more. PG&E was the only gas and electric provider to receive the award.

Focusing on Small Businesses

For the past four years, PG&E has partnered with the U.S. Small Business Administration (SBA) to provide capacity-building training to the diverse small business community. SBA is the only federal agency dedicated to providing loans, loan guarantees, contracts, counseling sessions and other forms of assistance to small businesses.

PG&E also hosted many other workshops throughout the year to support small businesses, including a forum in which invited government representatives, community-based organizations and experts from the financial sector exchanged views on how small businesses can gain quicker and easier access to capital.

Encouraging Prime Suppliers to Participate in Supplier Diversity

PG&E encourages its prime suppliers—those with over \$500,000 in annual business with PG&E—to submit a supplier diversity plan, set a supplier diversity performance goal, report on subcontracting with diverse suppliers and then detail their progress toward these goals. To support prime suppliers through this process, PG&E offers monthly training sessions and a new “Prime Supplier Academy” covering topics such as the value of supply chain responsibility and connecting with other businesses.

Strengthening Suppliers and Relationships

PG&E offers a wide variety of technical assistance and training programs to suppliers, many in conjunction with community organizations. These initiatives help diverse suppliers build their business acumen and include scholarship opportunities from the UCLA Management Development for Entrepreneurs Program and the University of Washington Minority Business Executive Program.

PG&E continues to sponsor educational scholarships that help suppliers manage supply chain risk and improve quality via International Organization for Standardization (ISO) certification. PG&E co-developed the first dual ISO web-based certification training for diverse suppliers.

Additionally, PG&E is encouraging mature diverse suppliers to explore and leverage new technologies by sponsoring their participation in the University of California Advanced Technology Management Institute, an executive training initiative.

PG&E’s Technical Assistance Program includes signature training offerings for diverse suppliers, with an emphasis in 2015 on cybersecurity:

- **Diverse Suppliers are Cyber-Secure** raises cybersecurity awareness and offers approaches that a small business can take to cost-effectively assess its vulnerabilities and reduce risks.
- **Diverse Suppliers are Safe** educates diverse suppliers on the importance of developing and improving their safety plans.
- **Diverse Suppliers Go Green** instructs participants on how to establish a sustainability program, reduce their environmental footprint and identify green business opportunities.
- **Diverse Suppliers Go Global** offers information and shares resources on how to evaluate and participate in the global marketplace.

2015 Milestones

In 2015, PG&E spent an all-time high of \$2.5 billion with diverse suppliers, representing 44 percent of our total spending. This was the fourth consecutive year that PG&E exceeded \$2 billion and the 10th consecutive year PG&E exceeded the CPUC’s goal of 21.5 percent.

In addition, PG&E’s supplier diversity subcontracting performance increased, with prime suppliers reporting more than \$618.4 million in spending with DBEs, representing an 8.7 percent increase over the prior year.

Highlights from 2015 include:

- **Strengthened training for prime suppliers.** Through our new Prime Supplier Academy, we launched courses and programs for prime suppliers covering the role that supply chain diversity and sustainability play in corporate strategies and providing tools to support their efforts.

- **Enhanced training on cybersecurity.** One of the first of its kind in the country, PG&E's Diverse Suppliers are Cyber-Secure training aims to strengthen the cybersecurity of small and diverse businesses. We enhanced the workshops with presentations from cybersecurity experts from the FBI and private sector.
- **Helped small and diverse businesses address financial challenges.** Part of our commitment to the White House SupplierPay Initiative, we offer a needs-based program that provides technical and financial assistance to small and diverse businesses with cash flow challenges. PG&E was the first gas and electric provider and one of the initial 26 companies to sign onto the SupplierPay Initiative.
- **Increased focus on LGBT businesses.** PG&E worked with the SBA and National Gay and Lesbian Chamber of Commerce to host the first LGBT Business Builder event, a session designed to remove barriers and increase access to strategic growth opportunities for LGBT-owned businesses. The workshop provided businesses with information on gaining third-party certification and how to take advantage of resources and information from the SBA for procurement contracts.

Measuring Progress

In 2015, PG&E spent \$5.6 billion on products and services, an 8.7 percent increase of \$448.3 million compared to the prior year. In comparison, at \$2.5 billion, our diverse spending increased by 16.9 percent, or more than \$356.8 million—significantly surpassing the general rate of increase in overall procurement.

Highlights include the following all-time highs in 2015:

- Minority business enterprises: \$1.6 billion, a 16.6 percent increase
- Woman business enterprises: \$723.1 million, a 16.3 percent increase
- Service-disabled veteran business enterprises: \$154.6 million, a 23.6 percent increase



Earning recognition

In 2015, PG&E was recognized as one of America's top corporations for our support of women's business enterprises by the Women's Business Enterprise National Council, was named to the U.S. Hispanic Chamber of Commerce's Million Dollar Club for our investment in Hispanic-owned businesses and was ranked in the top 40 companies for diversity by Black Enterprise Magazine, among other honors.

5-YEAR SUPPLIER DIVERSITY TREND

Category	2011	2012	2013	2014	2015
Total DBE \$ (millions)	\$1,611	\$2,052	\$2,317	\$2,112	\$2,468
Total DBE %	36.6%	38.8%	42.1%	40.9%	44.0%

SUPPLIER DIVERSITY AND SMALL BUSINESS RESULTS

Category	2013 (%)	2014 (%)	2015 (%)
Minority Men	19.8	19.0	20.2
Minority Women	7.6	7.4	8.1
Minority Business Enterprise	27.4	26.4	28.4
Women Business Enterprise (WBE)	12.5	12.1	12.9
Subtotal Women, Minority Business Enterprise (WMBE)	39.8	38.5	41.3
Service-Disabled-Veteran Business Enterprise (DVBE)	2.3	2.4	2.8
Total DBE	42.1	40.9	44.0
Utility Target	38.5	40.0	41.0
Non-Diverse Small Business ¹	7.1	7.5	6.2
Grand Total¹	49.2	48.4	50.2

1. Beginning with the 2015 reporting period, PG&E is reporting Small Business Enterprise results on a calendar-year basis. Previous-year reporting on small business enterprise spending aggregated partial year results (October through December of the previous year plus January through September of the reporting year). This accounts for the changes in percentages and spending totals reflected in the 2013 and 2014 data versus what was previously reported.

SUPPLIER DIVERSITY AND SMALL BUSINESS RESULTS (continued)

	2013 (\$ millions)	2014 (\$ millions)	2015 (\$ millions)
Supplier Diversity Spend ¹	2,317	2,112	2,468
Non-Diverse Small Business Enterprise Spend	393	385	349
Total Diverse and Small Business Spend ¹	2,710	2,497	2,818
Total Spend	5,504	5,161	5,609

1. Beginning with the 2015 reporting period, PG&E is reporting Small Business Enterprise results on a calendar-year basis. Previous-year reporting on small business enterprise spending aggregated partial year results (October through December of the previous year plus January through September of the reporting year). This accounts for the changes in percentages and spending totals reflected in the 2013 and 2014 data versus what was previously reported.

Looking Ahead

PG&E will continue to expand our supplier diversity program, outreach and support with a focus in 2016 that includes:

- Continuing to educate the small and diverse business community about the importance of having rigorous safety programs
- Promoting increased prime supplier support of PG&E's supplier diversity initiatives through education and training
- Supporting executive training initiatives that encourage mature diverse businesses to consider competing for opportunities in emerging technology
- Providing scholarships for quality and environmental systems certification to help diverse businesses build the necessary practices for successful, scalable growth
- Focusing on LGBT business growth through targeted outreach and workshops on how to do business with PG&E



Employees

Every day, PG&E employees are hard at work: putting our plans into action, partnering with customers and serving as ambassadors in our communities. Their efforts build essential relationships, strengthen our energy systems and ensure that PG&E is there around the clock. To position PG&E for success, we are focused on building and retaining an engaged, well-trained and diverse workforce ready to meet the challenges of our business while our industry faces unprecedented change.

Key Sustainability Indicators

Percentage of PowerPathway™ graduates hired into industry jobs:

90%

Number of employee volunteer hours:

87,000 hours

Highlights

Continued to create a workplace where every employee is empowered to speak up to share new ideas and raise concerns.

Exceeded our goal for employee volunteerism, with employees logging 87,000 hours serving our communities by building homes and playgrounds, cleaning state parks and mentoring students.

Implemented Leading Forward, a program designed to grow leaders at every level and support our goal of filling 75 percent of director-and-above vacancies from within PG&E.

Engaged more than 5,000 employees, about one-fifth of our workforce, in our Employee Resource Groups, which foster career development, leadership and a culture of inclusion.

Delivered more than 670,000 hours of technical, leadership and skills training for employees.

Provided career opportunities for veterans and women through our pioneering PowerPathway™ workforce development program, including enrolling our first-ever class of active-duty military members.

Continued to see a reduction in health care cost trends for PG&E with our health care plan, which focuses on preventive care and wellness.



Partnering to Step Up and Power Down

Step Up and Power Down is a collaboration designed to engage owners, operators and employees of downtown businesses in San Francisco and San Jose in a community-wide movement to reduce energy waste. The campaign seeks to save energy through participation in PG&E's energy efficiency programs and from everyday behavior changes.

PG&E employees have embraced the challenge—adopting energy-saving campaigns within our offices to “adopt-a-light” and reduce plug loads through a variety of fun initiatives.



Employee Engagement

Engaged employees feel valued, are confident about our future, excited about their work and understand and apply PG&E's values to drive improved performance across the organization—from safety to sustainability. To promote engagement, we are actively creating a workplace where every employee is empowered to speak up, not just about safety but how we can improve the overall employee experience. We also continue to provide opportunities for employees to learn and grow in their careers, connect with the communities where we work and offer feedback on how to make PG&E a better place to work.

Our Approach

Engaged employees share a meaningful connection to their jobs, can articulate PG&E's goals and understand how they and their broader organization contribute to PG&E's success.

Governance and Key Initiatives

Our executive-level People Committee drives PG&E-wide efforts to improve engagement and ensure continuous improvement. One of the committee's areas of focus continues to be a biennial employee survey that provides insights into the employee experience and our culture. In recent years, employee engagement has been a top priority, as evidenced by its inclusion in our Executive Guidance, which provides the strategic framework to guide our planning for the next five years.

We have also implemented engagement action plans driven by senior leaders, a dedicated communications campaign and interim surveys to keep organizations within PG&E on track toward meeting their engagement goals.

We track employee engagement through the biennial employee survey, most recently conducted in 2014, as well as a number of other measures to hold leaders

at all levels accountable for driving engagement. The People Committee provides guidance on senior leadership's role in addressing the survey results to drive continuous improvement.

Collaborating with our Unions

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.

These employees support areas critical to our business, including gas and electric operations, customer service, power generation, environmental and land services, telecommunications, and shared services.

PG&E and its unions work closely together in many important areas, such as enhancing technical training programs, fostering health and wellness, building career pathways and implementing numerous initiatives to promote a stronger culture of safety. For example, Pacific Gas and Electric Company and the IBEW reached the first-ever mutual aid agreement in 2015—coming to an agreement on how to respond to requests from other gas and electric providers for mutual-aid after natural disasters. Pacific Gas and Electric Company also reached agreement with the ESC on a new four-year contract addressing issues such as simplified job bidding, uniform pay ranges for certain classifications and changes to time-off benefits.

Engaging at the Grassroots Level

Employee-led initiatives play an essential role in engaging employees. These include grassroots initiatives focused on safety, wellness and environmental leadership, as well as ambassador teams that provide employees with engagement opportunities within their lines of business. More than 5,000 employees—about one-fifth of PG&E's workforce—participate in our Employee Resource Groups (ERGs), each of which contributes to building an inclusive culture at PG&E.

Every year, we honor employees whose work at the grassroots level 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, shining a light on individuals and teams who apply innovative solutions to their work.

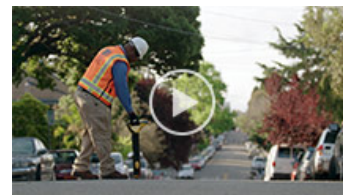
Engaging in our Communities

We also drive engagement through employee volunteer and giving programs. Our volunteerism efforts continue to grow, in part because PG&E's Better Together Giving Program prioritizes initiatives that offer opportunities for employees to volunteer. Our efforts are supported by local employee leadership teams that spearhead engagement opportunities in local communities.

PG&E also actively supports local nonprofit organizations through board service. Among officers who have been with PG&E for more than a year, more than 90 percent serve on nonprofit boards such as the California Academy of Sciences, the SF-Marin Food Bank, the American Red Cross, Habitat for Humanity, San Francisco Chapter of the United Negro College Fund and Meals on Wheels. Other PG&E employees are also consistently sought after as members of nonprofit boards for a wide range of organizations.

2015 Milestones

Volunteerism grew significantly in 2015, with employees enthusiastically contributing their time in the communities that PG&E serves. Whether installing solar panels on Habitat for Humanity homes, cleaning up state parks or volunteering at local food banks, the men and women of PG&E continue to give back.



We continued our television, radio and online advertising in local markets, featuring employees from those neighborhoods who are working to make a difference for customers. The ads respond to customer feedback asking for more details on PG&E's progress.

Highlights included the following:

- **Set a PG&E record for employee volunteerism.** Employees at every level contributed to our total of over 87,000 hours of community service—the most volunteer hours in our history—significantly outperforming our goal of 79,000 hours. When multiplied by the California industry-standard value of \$26.87 for a volunteer hour, this represents more than \$2.3 million in equivalent labor.
- **Created an online tool to help drive engagement.** We launched an online planning tool for officers and directors to leverage employee insights shared in the biennial survey, with measures to hold all levels of leadership accountable for driving engagement within their teams. The tool was accompanied by best practices for employee engagement.
- **Consolidated numerous governing bodies** into a central People Committee. Chaired by the vice presidents of our Human Resources organization, the People Committee was chartered to review and approve long-term workforce strategies, among other responsibilities.
- **Earned recognition as an innovative place to work.** PG&E was recognized by CIO Magazine as one of the CIO 100 Award winners for its innovative use of technologies to support emergency response base camps. Pacific Gas and Electric Company was the only combined gas and electric energy company on the list. The annual award program recognizes organizations around the world whose teams exemplify the highest level of operational and strategic technical excellence.

Measuring Progress

Employee engagement is the emotional commitment an employee has to PG&E and its goals. The employee engagement score from our 2014 survey was 76 percent. More than 83 percent of employees participated in the survey, our highest-ever participation rate. At the same time, this 2014 survey indicated several opportunities to continue improving our internal processes, enhancing the flow of information and helping employees feel valued. Going forward, our 2016 goal is to maintain our Employee Engagement score at 76 percent.

To address these concerns, we launched initiatives both within individual lines of business and across PG&E around these opportunities. This included an online tool to assist officers and directors with developing and implementing targeted employee engagement action plans, with measures to hold all levels of leadership accountable for driving engagement within their teams.



Month of Service highlights

In April, PG&E marked its fourth annual companywide Month of Service, which featured a broad range of volunteer projects throughout Northern and Central California. Overall, PG&E volunteers donned blue T-shirts and volunteered more than 12,000 hours across PG&E's service area—cleaning shorelines, planting native trees, helping to build homes and serving meals to those in need. This included partnering with the California State Parks Foundation on Earth Day at 10 park cleanup and restoration projects.

Click on the links below to see photos and details of our volunteerism at numerous locations.

- [Month of Service: Join PG&E for Earth Day, Arbor Day Celebrations in April](#)
- [Sacramento: Month of Service: PG&E Volunteers Pick Invasive Weeds to Reduce Fire Threat in Sacramento](#)
- [PG&E Provides People Power at State Park Earth Day Cleanups](#)
- [Redwood City: Brown Bag Build Celebrates PG&E, Habitat for Humanity Solar Partnership](#)



Campaign for the Community
More than giving. Giving Back.

PG&E's Campaign for the Community is an annual employee and retiree giving campaign. Employees can pledge a percentage of their salary and direct their donations to schools and nonprofits that are important to them. In 2015, employees and retirees pledged \$7.9 million, exceeding our goal and setting a new record for PG&E. Pledges were made by more than 10,000 employees and retirees, an 8 percent increase over 2014. Since 2000, PG&E employees and retirees have raised more than \$70 million through the Campaign for the Community, benefitting schools and nonprofit organizations primarily in communities where PG&E employees live and work.

In 2015, the total number of employee volunteer hours more than doubled from five years ago, exceeding our volunteer target by 50 percent. For 2016, we set an ambitious goal of 90,000 hours from employee volunteers.

EMPLOYEE SURVEY RESULTS		EMPLOYEE VOLUNTEER HOURS		
Year	Score ¹	Year	Target	Actual
2011	67%	2011	28,875	32,585
2012	71%	2012	34,215	41,792
2013	No survey	2013	43,050	47,855
2014	76%	2014	50,000	75,000
2015	No Survey	2015	79,000	87,000
2016	Pending	2016	90,000	

1. Refers to the percentage of favorable responses to questions on an employee survey that measures employee engagement. New engagement items were introduced for 2014.

Looking Ahead

Spearheaded by our executive-level People Committee, PG&E will continue implementing a companywide engagement strategy that includes action plans in every line of business to address employee feedback from our biennial employee engagement survey. The effectiveness of our strategy and plans will be measured through the 2016 survey.

In addition, PG&E will collaborate closely with our unions, boost volunteerism and implement engagement action plans led by senior leaders so that we retain top talent, attract the best candidates and cultivate the workforce of tomorrow.



Career Pathways

At PG&E, building the workforce of tomorrow starts today. In our rapidly changing industry, hiring and training employees with expertise in cybersecurity and solar energy goes hand-in-hand with developing the skills of our gas and electric crews. Our strategy includes a detailed in-house program to develop and train our next generation of leaders, partnerships with California colleges and universities, and outreach to underserved communities across our service area to find and recruit the most qualified and promising candidates.

Our Approach

Two industry trends are converging, posing twin challenges for PG&E and energy companies across the country. First, a large percentage of employees will be eligible to retire in the next five years. Second is the shortage of skilled workers in the pipeline to replace them.

To address this critical challenge, PG&E is reaching out to the public and private sectors. We are also cultivating emerging leaders within PG&E and providing best-in-class training and development opportunities to all employees. Our goal is to continuously improve the quality of our training programs and hire from our own ranks whenever possible.

PowerPathway™

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



PowerPathway student makes history

U.S. Marine Staff Sergeant Farron Drylie became the first active-duty military member to complete the PowerPathway program, commenting that "All of our instructors have been really fantastic. Many of them worked for PG&E and are subject matter experts."

Created in 2008, the program targets those who are out of work or underemployed, and has always had a strong focus on enhancing opportunities for women, minorities and those who have served our country in the military.

PowerPathway involves close collaboration with our local communities—including community colleges, community-minded organizations, labor unions and the public workforce development system—to attract and train future workers in the skills necessary for a career in the gas and electric business. The program is helping to create a pipeline of qualified candidates, with a growing number of program graduates finding employment at PG&E or as a contractor.

Military Outreach and Support

PG&E has been a strong supporter of training and hiring veterans and military members and recognizes the invaluable skills and perspectives they can offer companies looking for mature, highly qualified employees. Our commitment was recognized by Vice President Joe Biden, who visited PG&E's Oakland facility to thank PG&E for its support of the Obama Administration's workforce and economic development initiatives.

Internally, more than 1,000 employees, both veterans and those who support them, are part of PG&E's Veterans Employee Resource Group.

Targeted Recruiting

PG&E recruiting includes outreach to diverse communities in California and across the United States. In 2015 alone, our staff attended three national diversity recruiting conferences as well as 32 other smaller scale conferences, career fairs and events. PG&E also held 23 on-campus recruiting events at 14 campuses for university students, giving them the opportunity to speak with our employees and learn firsthand about PG&E.

In addition, PG&E offers summer internships for students and entry-level engineer and other rotational programs for recent college graduates to introduce young professionals to new work experiences and career development opportunities.

Employee Technical Training

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

Much of this training is provided at our two primary training facilities: the 44-acre Livermore Training and Qualification Center and the San Ramon Valley Conference Center. Beyond these facilities, we bring the classroom to employees with our new virtual learning studio and two mobile training centers that allow for on-site instruction.

In 2015, we also broke ground on a \$75 million, state-of-the-art Gas Operations Technical Training Center in Winters, California. Once construction is complete in 2017, the facility will employ approximately 50 full-time employees and provide about 36,000 technical training hours per year, with 100 to 150 students on site each day.

Leadership and Employee Development

PG&E's long-term strategic planning includes a focus on succession planning, supporting the successful onboarding of new employees and leaders, and supporting employee development throughout their careers.

All employees begin their time at PG&E with a full-day onboarding program where they learn about our history, vision and values. In 2015, to address the growing amount of leaders new to PG&E, we introduced a seven-day onboarding and development program that also included newly promoted first-time leaders.



Employees perform specialized training to handle energized power lines

PG&E completed annual training in Los Banos for a special group of linemen who perform upgrades, maintenance and repairs on energized transmission power lines that carry 60,000 to 500,000 volts of electricity. The technique, called "barehanding" in the energy industry, eliminates the need to de-energize a power line and interrupt electric service to customers, as was the practice in the past. Safety is the top priority as workers are protected from energized equipment by using insulated tools, ladders and aerial lifts and wearing a special suit that acts like a shield.

To support individual employees as they grow throughout their careers, PG&E offers more than 25 career development courses, an active mentoring program, tuition reimbursement for qualifying education expenses, temporary rotational assignments and other tools to help them grow in their current roles and advance at PG&E.

To support leaders' collective growth, we launched Leading Forward—a comprehensive program for leaders at all levels that features integrated training simulation and experiences to inspire our leaders to take on industry challenges and deliver on our five-year business strategy. The curriculum builds skills in areas such as leading with safety, managing operations and developing teams—all of which contribute to how we are shaping our culture. Participation is designed so that all leaders have an opportunity to attend based on a five-year schedule.

To improve engagement and promote a sustainable workforce, PG&E introduced a goal to hire 75 percent of director and above vacancies from within over the next five years. This internal hiring focus is helping to keep the turnover rate at PG&E low, with just 3.63 percent of new employees leaving voluntarily within one to three years from their hire date. That mark places PG&E within the first quartile among gas and electric providers.

In addition, we offer two formal rotational programs:

- **MBA Leadership Program**, a two-year program that places graduates from the nation's top business schools in positions to work on some of our toughest business challenges.
- **Engineer Rotational Development Program**, an 18-month program in partnership with Stanford University, which gives employees the opportunity to earn a PG&E Engineering Management certification.

2015 Milestones

In 2015, the PowerPathway program marked a number of significant achievements as we continued to build a talent pipeline for the energy industry. Notable accomplishments included:

- **Enrolled the first-ever class comprised of active-duty military members.** This new training effort was launched at Bates Technical College in Tacoma, Washington. The program was exclusively for service members stationed at Joint Base Lewis-McChord, a U.S. Army-U.S. Air Force installation.
- **Expanded PowerPathway to Kern County.** For the first time, PG&E offered its PowerPathway program in Bakersfield, generating thousands of applicants for just 20 positions. The PowerPathway Entry to Gas and Electric Operations program featured a customized 240-hour career training course designed to prepare participants for jobs in the energy field.
- **Announced commitment to hire 1,000 veterans in the next eight years.** Called the "1,000 Careers Project," the program will include educating PG&E recruiters, hiring managers and field leadership on the skills and abilities of military veterans, help ensure that veterans have access to ongoing support and professional development opportunities as they build careers at PG&E, and make PG&E a preferred employer for veterans in California.
- **Launched program for direct hiring from PowerPathway for military veterans.** We developed a five-week training program to help military veterans transition to roles in the gas and electric industry. The program produced 17 highly qualified customer service representatives, all of whom successfully completed the PowerPathway program and transferred to positions in PG&E's customer organization.



Partnered with American River College on Project STRIPE

Teaming with American River College (ARC), the Sacramento Utility District, the City of Sacramento and other agencies, PG&E modified PowerPathway to add industry-specific training to ARC's Project STRIPE, an intensive pre-apprenticeship program that prepares students for skilled trades jobs. The class lasted 16 weeks and covered topics such as equipment safety and green technology.

We also continued to make strides toward our leadership and employee development goals. Highlights included:

- **Implemented Leading Forward**, an integrated framework designed to develop leaders at every level. In 2015, we offered courses for newly hired or promoted leaders, directors and officers to accelerate their development. A program for supervisors will roll out in 2016, with the remaining programs scheduled to launch in 2017. The program was recognized by the White House for helping workers gain skills to advance into better-paying jobs as part of the Administration's effort to highlight the importance of the private sector in developing the capabilities and leadership skills of their team members.
- **Expanded a Crew Leadership Program**. Designed to strengthen leadership skills among our crew leads, this hands-on, interactive course expanded in 2015 to our gas operations organization, which saw more than 165 crew leads complete the course. An additional 125 electric operations crew leads completed the course in 2015.
- **Developed a program to improve organizational effectiveness** by simplifying our processes, enhancing governance and taking other related steps that will enable our employees to grow and thrive.
- **Expanded our Summer Intern program**, one of the many ways PG&E helps develop a talented new generation of workers and provide a view of PG&E to potential employees. We are on pace to hire more than 200 interns in 2016.
- **Continued our Apprentice Line Worker Program**. This comprehensive five-year program is designed to develop the most proficient and safest line workers in the industry through a combination of field and classroom work. The fifth and final year focuses on coaching and communication so our line workers can lead while in the field. We expect 125 apprentices to graduate by the end of 2016.

Top military friendly employer

PG&E was named by G.I. Jobs Magazine as one of the top 100 military-friendly employers for the fourth consecutive year and fifth time overall. PG&E improved to number 43 overall in the rankings, which are based on the strength of military recruiting efforts, the percentage of new hires with previous military service, retention programs and policies on National Guard and Reserve service. PG&E was also named for the first time as a Military Spouse Friendly Employer by Military Spouse Magazine.



Earning international recognition

Lloyd's Register, the prestigious international engineering and safety consulting firm, recognized PG&E Academy, our in-house organization charged with enhancing employees' skills and qualifications, as "world class" in a recent review. The firm stated that the Academy uses "state of the art tools to deliver specific and targeted training to employees."

Measuring Progress

The wide variety of PowerPathway programs—ranging from customer service representative to gas pipeline inspector—are adding new, diverse and qualified candidates to the utility talent pool. By the end of 2015, more than 800 people—including 400 veterans—had graduated from one of the programs. Approximately 80 percent of program graduates have gone on to find employment in the energy industry. Other program highlights include:

- 108 program graduates in 2015
- 323 graduates hired by PG&E since 2008, with a 10 percent higher retention rate after six months than other hires
- Within one year of hire, 70 percent progress into apprenticeships or higher job classifications

Additionally, as part of our continuing commitment to our employees, we delivered more than 670,000 hours of technical, leadership and employee training in 2015. To measure the success of that training, participating employees 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 2015, training effectiveness measured 4.44, which exceeded our goal of 4.31.

Restoration exercises build trust, coordinated communications

Every quarter, employees responsible for the operation, reliability and restoration of the electric transmission system perform exercises that offer training and experience on restoring service to customers. Participants practice using local system restoration procedures and work through simulations, enhancing coordination and communication within PG&E.

Looking Ahead

PG&E will continue to evolve our workforce strategies to train, develop and retain top talent from across our service area and beyond. PowerPathway is working with military installations in California to bring active duty service member training programs to California, and the direct-hire PowerPathway model will be expanded to other lines of business within PG&E.

We also remain committed to delivering high-quality training across a broad spectrum of categories to build and maintain a qualified, motivated and skilled workforce. With many of our employees eligible to retire in the coming years, we continue to focus on capturing the institutional knowledge gained through their years on the job by building it into our formal work practices and training or through directly training other employees.



Diversity and Inclusion

Diversity and inclusion are part of our DNA at PG&E. Individually, diversity and inclusion are both powerful elements, but bringing them together creates an environment where individuals, ideas and teams can thrive. Together, they help us better represent the communities we serve and better meet and exceed the needs of our customers.

Our Approach

Governance Structures

PG&E's efforts to foster a diverse and inclusive culture and workforce are led by Pacific Gas and Electric Company's Chief Diversity Officer, with support from the senior leadership team. Our Diversity Council—composed of PG&E officers and Employee Resource Group (ERG) leaders—meets three times a year to review, enhance and inform PG&E's diversity and inclusion strategy. Each line of business has a Workforce Diversity Champion and annual Workforce Diversity Action Plan tailored to that group.

The Compliance and Public Policy Committee of PG&E Corporation's Board of Directors regularly reviews our diversity and inclusion practices and performance. The goal of this oversight is to ensure that diversity and inclusion principles are embedded throughout the life cycle of our talent management programs—from initial workforce development and recruiting to performance management and career and leadership development.

To that end, new PG&E leaders attend an Inclusion Leadership Workshop as part of orientation. Materials on inclusion are available to employees on PG&E's intranet, and PG&E regularly recognizes employees who embody our diversity and inclusion principles. That recognition culminates each year with the President's Diversity Champion Awards, which honor employees for their outstanding achievements in the areas of diversity and inclusion.

PG&E's Employee Resource Groups

- *Access Network (supporters of, and people with, disabilities)*
- *Asian*
- *Black*
- *Latino*
- *Legacy (tenured employees)*
- *NuEnergy (new to the workforce or to PG&E)*
- *PrideNetwork (LGBT and allies)*
- *Samahan (Filipino)*
- *Veterans*
- *Women's Network*

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 and harassment 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.

Grassroots Involvement

Our ERGs have been at the forefront of PG&E's diversity and inclusion efforts for more than 40 years. Through skills workshops, awareness campaigns, volunteerism, networking events, leadership development and more, our ERGs work tirelessly to promote and instill diversity and inclusion as values for every employee. In addition, each year, every ERG raises money for college scholarships for local students.

We also support events for organizations such as the Society of Hispanic Professional Engineers, the Society of Women Engineers, the National Society of Black Engineers, The American Association of Blacks in Energy, The Arc San Francisco and Out & Equal Workplace Advocates.

Access Network celebrates five years of supporting employees with disabilities

PG&E's Access Network focuses on raising awareness of disability issues and providing resources to support individuals with disabilities. The group counts more than 350 employees among its members, and also provides support to communities.

2015 Milestones

Last year, we continued to cement diversity and inclusion as cornerstones in our business in numerous ways. Highlights included:

- **Increased engagement in our ERGs.** Our ERGs continued to grow, with more than 5,000 employees, or about 23 percent of our workforce, holding membership in one of 10 ERGs and a third of members belonging to more than one ERG. Additionally, more than half of PG&E's officers serve as executive sponsor of an ERG.
- **Spurred access to higher education.** Our ERGs awarded a record \$429,000 in scholarships to 176 students, ranging from \$1,000 to \$8,000. Since 1989, more than \$4 million in scholarships have been awarded to thousands of recipients. Additionally, many of these scholars have gone on to become interns at PG&E.
- **Garnered high praise from leading diversity advocates.** Pacific Gas and Electric Company's diversity efforts were recognized by a wide variety of groups and publications, including *LATINA Style* magazine (one of the best places for Latinas to work in the United States), *G.I. Jobs Magazine* (one of the top 100 military-friendly employers), and *Military Spouse Magazine* (Military Spouse Friendly Employer for the first time). In addition, for the eighth straight year, Pacific Gas and Electric Company was named as one of the top five utilities by *DiversityInc*, one of the nation's leading publications on diversity and business, and earned 100 percent on the Human Rights Campaign's annual Corporate Equality Index. Pacific Gas and Electric Company also earned a perfect score of 100 percent in the annual Disability Equality Index, a measure of disability inclusion policies and practices.



PG&E sponsors historic LGBT business builder event

More than 200 representatives of LGBT-owned businesses came together to participate in the first stop of a nationwide LGBT Business Builder tour. The workshop provided businesses with information on gaining third-party certification, ways to draw upon U.S. Small Business Administration (SBA) resources for procurement contracts and how to take advantage of business opportunities now available in California because of Assembly Bill 1678, which requires utilities to give LGBT businesses the same access to contracts as other minority, women and disabled veteran enterprises. The event was cosponsored by PG&E, SBA and the National Gay and Lesbian Chamber of Commerce.

SBA Administrator Maria Contreras-Sweet was the keynote speaker at the first-ever LGBT Business Builder event.

Photo by Tony Khing

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. PG&E's workforce statistics by race, ethnicity and gender for 2013 to 2015 are below.

PG&E WORKFORCE DEMOGRAPHICS, 2013 – 2015			
EEOC Category	2013	2014	2015
Women	28.3%	28.2%	28.1%
Officials and Managers	31.9%	32.2%	32.0%
Professionals	34.8%	35.0%	35.2%
Technicians	18.4%	18.7%	18.6%
Administrative Support Workers	74.7%	72.3%	71.8%
Craft Workers	4.0%	2.7%	2.6%
Operatives	12.9%	3.4%	4.8%
Laborers and Helpers	6.6%	9.2%	11.2%
Service Workers	11.3%	9.7%	10.3%
Ethnic Minorities	40.4%	41.1%	41.7%
Officials and Managers	30.1%	31.3%	32.0%
Professionals	42.3%	42.5%	43.8%
Technicians	37.9%	41.9%	39.4%
Administrative Support Workers	59.7%	59.7%	60.7%
Craft Workers	32.3%	31.9%	32.6%
Operatives	37.8%	33.3%	41.8%
Laborers and Helpers	45.8%	47.7%	48.1%
Service Workers	31.7%	32.2%	33.2%
Minority Groups			
American Indian or Alaskan Native	1.4%	1.4%	1.3%
Asian	14.5%	14.6%	14.7%
Black/African American	6.4%	6.3%	6.3%
Hispanic/Latino	16.3%	16.7%	17.0%
Native Hawaiian or Pacific Islander	0.4%	0.4%	0.5%
Two or more races	1.5%	1.7%	1.9%

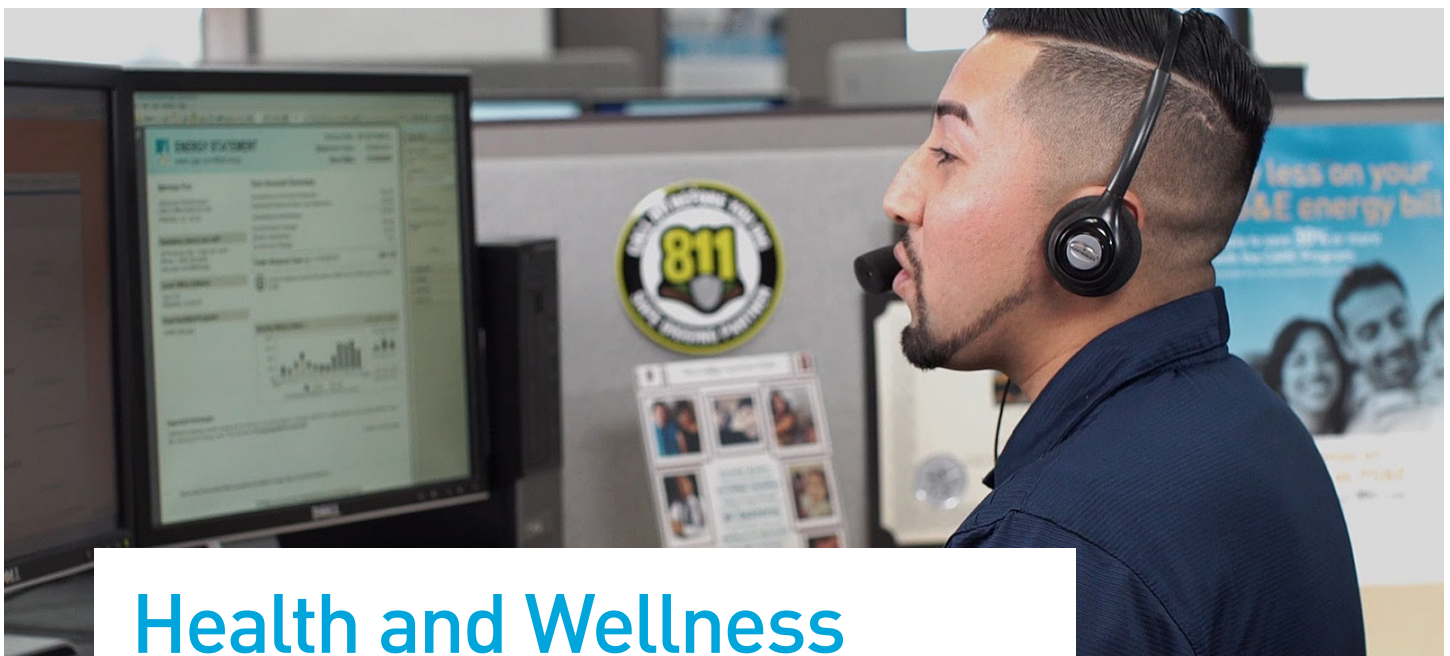
PG&E Corporation EEO-1 Report, as of July 1, 2015.

BENCHMARKING WORKFORCE DEMOGRAPHICS		
Category	PG&E	U.S. Utility Average ¹
Women	28.1%	25.7%
Ethnic Minorities	41.7%	24.7%

1. Source: 2014 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.

Looking Ahead

To continue to build a culture where all employees can flourish, our diversity and inclusion efforts are focused on shaping a speak-up culture, fostering careers, connecting with our communities and improving the service we provide to customers. We are further embedding diversity and inclusion principles and tools within our business—spanning recruiting and hiring, leadership development, and ethics and compliance. Each line of business continues to have a Workforce Diversity Champion who works from within his or her organization to help build awareness and model inclusive behaviors. Additionally, our ERGs continue to play a central role in our diversity and inclusion efforts both at PG&E and in our communities.



Health and Wellness

At PG&E, we believe that health and wellness are inextricably linked to safety—both for our employees and the public. Employees who are healthy and well in all aspects of their lives are more focused, productive and effective, leading to improved performance and safety for our workforce and communities.

Our Approach

Through benchmarking and adopting best practices from companies in similar industries, PG&E is driving a prevention-first approach that aims to improve employee health by identifying and treating issues before they start. We believe in taking a comprehensive approach to wellness that encompasses physical, emotional and financial health—and our preventive efforts can be seen in all three areas.

Physical Health

PG&E's medical plan and benefits provide comprehensive care and service options designed to promote the overall health of our workforce. With wellness drivers such as employee health screenings, our Tobacco Cessation Program and team competitions to promote active and healthy lifestyles, employees have access to a wide range of options to improve their overall well-being.

Those options include a telephonic health coaching initiative through which employees can work with a dedicated coach to get personalized support for their health goals, as well as a "telemedicine" program that provides the ability to virtually meet with a doctor anytime, anywhere, using a computer or mobile device.

Our Wellness Ambassadors—employees located throughout our service area—help implement and increase awareness of our wellness programs and services.

For employees in our highest-risk positions, we continue to expand our Industrial Athlete Program, a job-specific set of actions designed to reduce injuries and improve the physical and mental resilience of employees working in physically demanding jobs.

Health screenings promote healthy behaviors

By participating in PG&E's annual health screening program and either being tobacco-free or participating in a tobacco-cessation program, employees can earn credits in a health reimbursement account, which can be used to cover their deductible and pay for out-of-pocket medical expenses. In 2015, 89 percent of eligible employees received a health screening—a top decile participation rate.

Our 24/7 Nurse Report Line provides immediate access to trained medical professionals able to advise employees on how to care for work-related discomforts or injuries, emphasizing our belief that early assessment and treatment are key to recovering and remaining healthy.

Emotional Health

PG&E’s Employee Assistance Program offers employees options to help them manage life’s demands at work and at home, from confidential counseling to referrals for local services—whether by telephone, with counselors at their job site or in the communities where they live.

Additionally, our Peer Volunteer Program promotes a culture of openness, acceptance and recovery, with PG&E employees who are in long-term recovery from substance abuse, or have a loved one who is, assisting others who need help. Run in collaboration with union leadership, the program’s network of peers throughout our service area continues to grow as we work to shed the stigma related to substance abuse and mental health issues.

Financial Health

Financial challenges have the potential to negatively impact one’s health, increase absenteeism and adversely affect on-the-job performance. PG&E provides employees with a wide range of services to help them manage their finances and plan for the future, including free access to a financial advisor, life and accident insurance, and 401(k) and pension retirement plans.

Employee health and wellness resources

- Annual health screenings held on-site so employees can conveniently check key health indicators such as body mass index and cholesterol levels
- Telephonic health coaching for one-on-one support to help employees meet their health goals
- An extensive online health and wellness portal with calorie trackers, meal and exercise plans and other resources
- A tobacco-free program providing one-on-one support with a certified tobacco cessation specialist
- Gym discounts for employees and their family members

2015 Milestones

Highlights included the following:

- **Expanded our Industrial Athlete Program.** We rolled out the program across PG&E’s service area, beginning with those areas showing the greatest need. The program includes a component based on sports medicine principles and led by an on-site prevention specialist, which focuses on early signs and symptoms of musculoskeletal discomfort, observing work tasks and teaching employees how to avoid aggravating symptoms. Early intervention can stop symptoms from worsening—and even reverse them—helping to shorten periods of discomfort and limitation.
- **Piloted an on-site telemedicine kiosk program.** Introduced at PG&E’s headquarters in San Francisco, the kiosk asks employees to enter health information and guides them through the process of taking certain vital measurements. Employees are then placed in an online queue to meet virtually with a doctor via video chat.

Measuring Progress

Over the past five years, PG&E’s programs have reduced the number of employees unable to work due to health-related issues. The increase in workforce availability from 2014 to 2015 is equal to nearly \$8.8 million in savings.

What’s more, since introducing our new health plan in 2013, PG&E has seen a consistent improvement in health care cost trends. Prior to the new plan, health care costs from 2008 through 2012 averaged an increase of 8 percent annually, which was above the national average. Since the introduction of the new plan, PG&E’s health care costs from 2013 to 2015 averaged a decrease of 1 percent annually, significantly better than the national average.



Biking to work improves health and the environment

More than 50 PG&E San Francisco employees pedaled their way to work as part of Bike to Work day. As part of our commitment to clean transportation and employee health, PG&E works to support those who choose to bike to work by providing secure bike parking in the General Office garage and at other PG&E locations.

Photo by Matt Nauman

WORKFORCE UNAVAILABLE DUE TO HEALTH ¹	
2011	10.0%
2012	8.7%
2013	8.2%
2014	7.7%
2015	7.4%

1. Percentage of full-time employees unavailable for work due to long-term or short-term health reasons.

Looking Ahead

PG&E continues to hone and expand our services and offerings to help build a healthy and safe workforce. These include:

- **Improving access to quality care.** PG&E plans to make healthcare more accessible by providing on-site or near-site access to care. Solutions may include a clinic at larger locations, additional kiosks, a mobile van and/or a visiting nurse.
- **Providing resources to identify health care Centers of Excellence.** PG&E will provide employees with resources to access Centers of Excellence for rare and complex cancers, with plans to add more Centers of Excellence in the future.
- **Redesigning our time-off and disability plans.** PG&E is revising existing time-off policies and disability plans to ensure they are comprehensive, sustainable and balanced across all job classifications. The changes include competitive short-term disability coverage and an improved paid family leave policy.



PG&E team wins International Ergonomics Competition

In an effort to make employees safer, a group of PG&E electric employees implemented a program to improve ergonomic conditions for PG&E's linemen. The program gives employees the tools they need to stay safe and healthy, which includes hands-on training, a dynamic warm-up program for industrial workers and the replacement of high-risk tools with more ergonomically friendly devices. In recognition of their efforts, the team won the 2016 Ergo Cup Competition for Ergonomics Program Improvement.



Environment

For decades, PG&E has embraced a commitment to environmental leadership that now serves as an essential element of our sustainability efforts. As we work to combat climate change and create California’s clean energy future, we are expanding supplies of renewable energy, pioneering new ways for customers to save energy and protecting sensitive habitats and species—always anchored in a commitment to fully meet all environmental requirements.

Key Sustainability Indicators

Reduction in water use at office facilities and service yards:

7.8%

Percentage of power from eligible renewable resources delivered to customers in 2015:

29.5%

Highlights

Joined California's delegation at the COP21 Paris climate talks to voice our support and highlight the crucial role gas and electric providers can play in combating climate change.

Announced a comprehensive climate pledge as part of an Obama Administration initiative to rally U.S. companies behind the need for action on climate change.

Published our first Climate Change Vulnerability Assessment, examining the risks we face from flooding during severe storms, sea level rise, heat waves, wildfire danger and other climate risks.

Joined EPA's Natural Gas Methane Challenge as a founding partner to further reduce emissions from our natural gas transmission and distribution systems.

Collaborated to address the impacts of California's drought, including conserving water in our facilities and helping customers save about 1.2 billion gallons through energy efficiency.

Pledged to invest \$100 million over the next five years to electrify our vehicle fleet.

Set a new five-year goal to achieve top decile reductions in energy, water and waste in our offices and service yards.

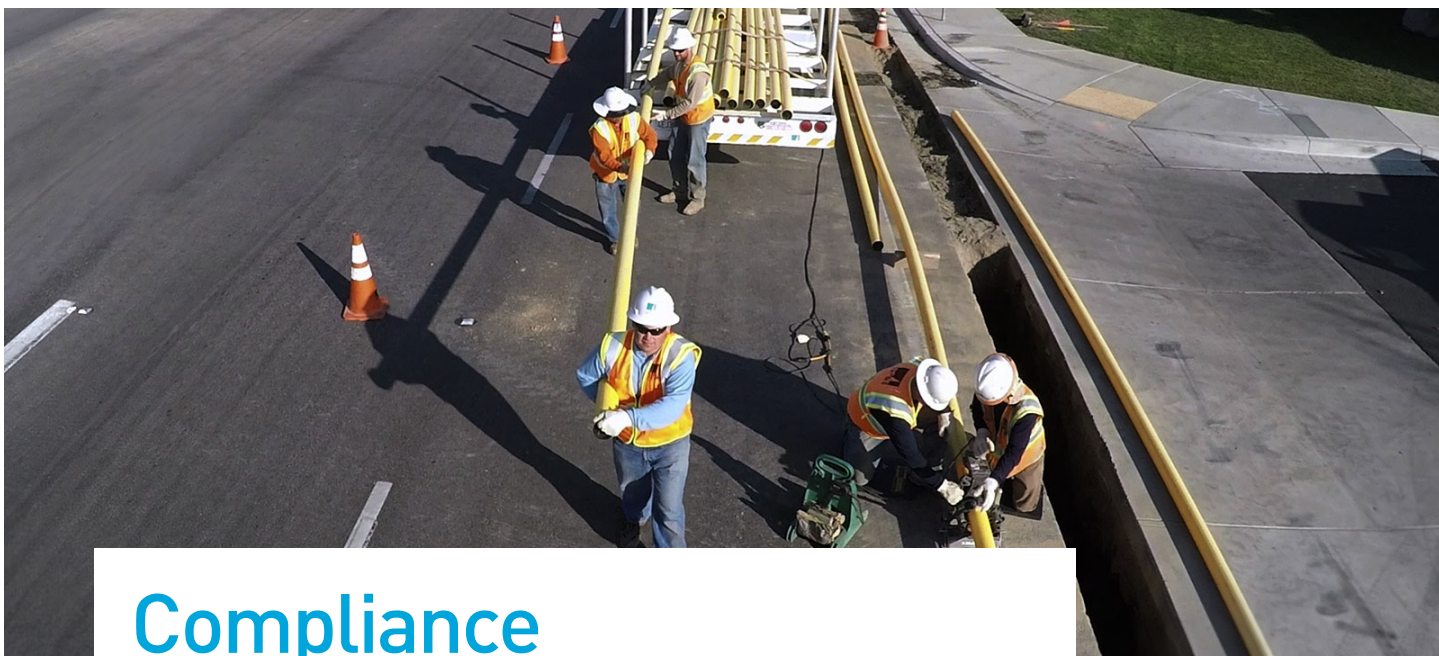
Made additional land transfers as part of the Land Conservation Commitment, which ultimately will permanently protect 140,000 acres of PG&E-owned watershed lands.



Building climate resilience

PG&E is working to build greater resilience to the challenges posed by climate change—from flooding and sea level rise to extreme temperatures and wildfires. As an example, PG&E is partnering with the University of California, Berkeley and Department of Water Resources to install equipment to help improve our forecasts of hydro conditions in light of a changing climate.

We are working together to install a next-generation hydrographic data network that will better measure and monitor snowpack, climate, soil moisture and other factors to improve monitoring and predictive tools, reduce uncertainty in water forecasts and help adapt to climate change.



Compliance

PG&E's commitment to the environment begins with our adherence to the letter and spirit of the applicable environmental laws and regulations. Our environmental policy and governance practices are designed to promote compliance with environmental requirements and provide the foundation for us to take our performance beyond legal and regulatory baselines.

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 carbon dioxide and other greenhouse gas (GHG) emissions.

To ensure we meet these requirements, PG&E uses an Environmental Management System (EMS) modeled after the ISO 14001 environmental management standard and consistent with its "Plan, Do, Check, Act" model for continuous improvement. The system uses a series of compliance work processes that enable PG&E to manage regulatory compliance and our environmental impacts by each line of business.

The Vice President of Safety, Health and Environment for Pacific Gas and Electric Company oversees our commitment to meet safety and environmental requirements. PG&E's integrated planning process provides a mechanism for managing environmental risk and compliance while driving continuous improvement, as do enterprise-wide initiatives such as the Corrective Action Program and numerous other forums.

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.

2015 Milestones

Planning

Our current system uses a series of work processes to manage regulatory and environmental performance by each line of business. We monitored the changes to the ISO 14001:2015 standard to inform and improve these processes.

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 those experiences and integrate any lessons into our work processes and staff development.

In 2015, we continued to find new opportunities for applying technologies and processes to further our compliance efforts and minimize impacts on the environment. Key EMS initiatives included:

- The development of an SAP-based compliance tool that can analyze trends and inform our risk management efforts.
- Expanding the use of an automated tool that uses Geographic Information System spatial data to assess projects for potential environmental impacts.
- Leveraging enterprise-wide initiatives such as records and information management and the integrated planning process to embed environmental risk assessments into long-term planning.

PG&E conducts extensive 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 all 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

A robust 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 four ways: self-assessments, comprehensive reviews, compliance and risk management reviews, and internal audits.

- **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.
- **Comprehensive Reviews:** These reviews are performed by personnel from the Safety, Health and Environment department who are not responsible for compliance at the facility or the project being inspected. Each comprehensive review involves evaluating all environmental compliance obligations associated with the operation of a facility or project.
- **Compliance and Risk Management Reviews:** These reviews, designed to assess adequacy of controls and risk mitigation, as well as compliance work processes, are conducted by the Compliance and Risk Management team, independent from the Safety, Health and Environment department.
- **Internal Audits:** The Internal Audit department, which reports directly to the PG&E Corporation Chief Financial Officer, conducts systemic and programmatic controls-based audits to independently analyze the effectiveness of our environmental compliance management systems. The results of these audits are reported annually to the Audit Committees of the PG&E Corporation and Pacific Gas and Electric Company Boards of Directors.

During 2015, we performed 5,540 self-assessments, 58 comprehensive reviews, four internal audits and five compliance and risk management reviews of various environmental processes, facilities and projects.

To drive continuous improvement, we employ a rigorous 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 2015.

Reported Unintentional Releases and Permit Exceedances

We report unintentional releases that meet regulatory thresholds, as well as many smaller releases, in an effort to ensure operational transparency to local agencies. We reported a total of 170 releases, defined as an unintentional discharge of a regulated substance that exceeds a reporting threshold or thresholds allowed in applicable permits.

Agency Inspections

In 2015, a total of 641 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 Level 1 (findings that resulted in an actual or potential environmental impact) or Level 2 (findings that did not result in an actual or potential environmental impact). We also track the percentage of agency inspections that do not result in written enforcement actions.

We received three Level 1 enforcement actions in 2015. Our rate of inspections without a written sanction was 91 percent, 1 point above our target of 90 percent.

PG&E paid a total of \$188,445 in penalties.

COMPLIANCE DATA			
	2013	2014	2015
Level 1 Enforcement Actions	6	5	3
Percentage of Inspections Without a Written Enforcement Action	90%	93%	91%
Releases/Exceedances	218	134	170
Penalties Paid	\$64,244	\$3,100	\$188,445
Agency Inspections	341	571	641
Audits Performed	33 ¹	44 ²	67 ²
Self-Assessments Performed	2,508	5,633	5,540

1. Includes system audits and comprehensive reviews.

2. Includes system audits, comprehensive reviews and compliance and risk management reviews.

Looking Ahead

We will maintain our commitment to continuous improvement as we work to enhance our EMS. In 2016, we will continue to focus on expanding the use of technology to minimize environmental impacts as we perform gas and electric infrastructure improvements. We are also leveraging our enterprise-wide strategic planning process to adopt shared goals and enhancing our EMS to better measure our progress in achieving these goals.

In addition, in 2016 we will perform an independent third-party gap analysis of PG&E's EMS that is consistent with the ISO 14001 standard.



Climate Change

PG&E has a long history of taking action to combat climate change. Doing so is integral to our core mission of providing safe, reliable, affordable and clean energy to customers. PG&E's efforts remain focused on reducing our carbon footprint, advancing low-carbon policies for California and the nation, helping customers reduce their energy use with industry-leading tools and incentives, and adapting to changing climate conditions.

Our Approach

Our involvement begins locally but extends to the state and international levels. PG&E leaders joined California's delegation at the COP21 international climate talks in Paris to voice our support for an agreement to slow global warming and highlight the role gas and electric providers can play in helping to deploy low-carbon technologies on the scale that's needed to combat climate change.

Prior to the Paris talks, PG&E Corporation's Chairman and CEO joined President Obama and senior administration officials at the White House as they announced new pledges by major companies to reduce greenhouse gases and address the impacts of global warming. PG&E was among the companies that signed on to the Administration's American Business Act on Climate initiative, which aimed to rally U.S. companies behind the need for action on climate change.

At the state level, PG&E supported Senate Bill (SB) 350, which increases the state's Renewables Portfolio Standard (RPS) to 50 percent by 2030 and doubles state energy efficiency goals. SB 350 supports the governor's April 2015 executive order, which set a new goal to reduce greenhouse gas emissions by 40 percent below 1990 levels by 2030.



Paris comes to San Francisco: PG&E, world energy ministers follow up on historic UN Climate Summit

PG&E participated in the seventh Clean Energy Ministerial (CEM7), which brought together energy ministers and delegates from more than 20 countries around the world. Together with business leaders, entrepreneurs, industry experts and others, the energy ministers at CEM7 committed to expanding clean energy deployment and delivering on the pledges made for the historic Paris climate agreement.

PG&E views SB 350 as an important step toward achieving California's climate change and clean energy goals. It continues our state's long history of policy leadership, which has spurred advancements in technology and innovation, and kept California at the forefront of environmental progress.

To do our part, we are taking an integrated approach to help achieve sustainable GHG emission reductions in a way that manages costs for customers, delivers safe and reliable electric and gas service, and creates a model for others to follow.

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 a company's risks and opportunities associated with climate change.

PG&E reports its greenhouse gas emissions to the California Air Resources Board (ARB) and 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 Climate Disclosure Project, an international not-for-profit organization that requests information on behalf of institutional investors.



Perfect score for PG&E on prestigious climate change disclosure list

PG&E was named to the S&P Climate Disclosure Leadership Index by the CDP, an organization that represents 822 institutional investors with \$95 trillion in assets. PG&E earned a perfect 100 score from the organization and was one of only four U.S. gas and electric energy companies to make the list.

Engaging Our Customers

An integral part of our effort to combat climate change involves working with customers to help them achieve energy savings and greenhouse gas emission reductions through some of the nation's leading programs and incentives for energy efficiency, demand response and solar installation. These efforts include helping local governments develop strategies and implementation plans to reduce emissions, including providing them with community energy profiles to assess opportunities and connecting them with PG&E programs and other resources to help them reduce emissions.



Helping customers go solar

PG&E's Solar Choice program offers customers the option to receive up to 100 percent solar power without the need to install rooftop solar panels. The solar energy is produced locally in Northern and Central California—reducing the carbon footprint of our customers and driving the development of solar resources within the state.

Addressing Our Own Carbon Footprint

PG&E believes that gas and electric providers have a responsibility to reduce greenhouse gas emissions.

In step with California's evolving energy policy, in June 2016 PG&E announced a Joint Proposal with labor and leading environmental organizations that would increase investment in energy efficiency, renewables and storage beyond current state mandates while phasing out PG&E's production of nuclear power in California by 2025. It includes PG&E's commitment to a 55 percent renewable energy target in 2031, an unprecedented voluntary commitment by a major U.S. energy company.

We are also committed to helping the state meet the long-term targets established by the governor and, in the near term, California's Global Warming Solutions Act, or AB 32.

AB 32 requires California to gradually reduce its greenhouse gas emissions to the 1990 level of 431 million metric tons of carbon dioxide (CO₂)-equivalent by 2020. The law covers emissions from PG&E's fossil-fuel power plants, natural gas compressor stations and electricity imported into California. In 2015, the law was expanded to cover emissions from the combustion of natural gas delivered to customers.

In the interim, we are actively working to reduce our carbon footprint by increasing our supply of clean and renewable energy, reducing energy use in our facilities, avoiding emissions in our operations, investing in lower-emission vehicles and building a more sustainable supply chain.

Advancing Responsible Policy Solutions

PG&E is committed to promoting a diverse set of low- and zero-carbon solutions to advance clean energy innovation in California and beyond—reducing greenhouse gas emissions while spurring innovation and job creation.

We actively engage in ARB's stakeholder activities to refine California's cap-and-trade program implementation in order to meet AB 32's greenhouse gas emissions reduction goals at the lowest possible cost to customers. Features of the program that will help mitigate costs to customers include free allocation of greenhouse gas emissions allowances to electric and natural gas utilities for the benefit of their customers, a sufficient supply of high-quality offset credits and an Allowance Price Containment Reserve (APCR) that reduces the risk of excessively high allowance prices, a price ceiling to ensure prices remain below the highest APCR price and linkage with other cap-and-trade programs.

More broadly, we remain focused on actions related to electric vehicle deployment, grid innovation and making the hydro-power licensing and relicensing process more effective and efficient.

In August 2015, EPA released the final Clean Power Plan, which includes guidelines for each state to develop plans to achieve greenhouse gas reduction targets under section 111(d) of the Clean Air Act. PG&E appreciated the significant outreach and stakeholder engagement conducted by EPA in conjunction with the rule's development.

Following publication of EPA's regulations, a number of parties challenged EPA's section 111(d) regulations in the United States Court of Appeals for the District of Columbia Circuit and petitioned the Court to stay the regulations pending review of the appeal on the merits. The D.C. Circuit denied the request for a stay, but in February 2016, the U.S. Supreme Court granted a stay, pending review of the appeal by the D.C. Circuit. The Supreme Court's decision may affect the nature, extent and timing of implementation of these regulations.

Ultimately, if the Clean Power Plan is upheld in court, PG&E wants to ensure that the EPA's rules provide the flexibility to recognize the unique circumstances and emissions profiles of power companies and individual states across the country. We will also work with stakeholders to explore opportunities to develop multistate compliance approaches, including multistate cap-and-trade programs.

Central to our approach is engaging at the state, federal and international levels through a variety of policy think tanks and advocacy groups, such as the Center for a New Energy Economy, Georgetown Climate Center, Center for Climate and Energy Solutions, Alliance to Save Energy, Edison Electric Institute, Bipartisan Policy Center, Electric Power Research Institute, International Emissions Trading Association, Business Council for Sustainable Energy, Coalition for Emission Reduction Policy, Natural Gas Downstream Initiative and the Electric Drive Transportation Association.

PG&E joins EPA's Methane Challenge

PG&E joined the U.S. Environmental Protection Agency's (EPA) Natural Gas Methane Challenge as a founding partner along with 40 other U.S. companies. The challenge calls on oil and natural gas companies to voluntarily reduce methane emissions beyond regulatory requirements, and to highlight these efforts in a comprehensive and transparent manner. As part of the challenge, PG&E committed to further reduce emissions from its natural gas transmission and distribution systems and adopt five best management practices recommended by EPA over the next five years.



PG&E's support for the Clean Power Plan

PG&E affirmed its support for the Clean Power Plan by joining a number of other energy providers in filing a motion to intervene on behalf of the EPA in front of the D.C. Circuit court. In the filing, PG&E and the other companies stated, "As a result of [our] extensive experience and investments in developing and procuring generation from low-emitting sources, [we] are well positioned to comply with and benefit from the Clean Power Plan and support its objectives of reducing CO₂ emissions from the power sector."

Planning for Potential Climate Change Impacts

Since 2008, PG&E has been investigating the potential physical risks of climate change to our system. We have identified a number of potential risks to our business, including sea level rise, temperature changes, rainfall and runoff patterns, wildfire risk and storm frequency and intensity.

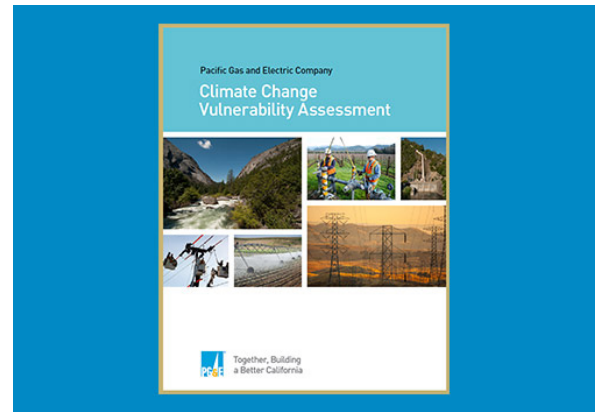
There are four key aspects to PG&E's approach to climate change resilience and adaptation:

- **Near-term planning:** Robust emergency response plans and procedures to address near-term risks, including more extreme storms, heat and wildfires.
- **External engagement:** Active engagement at the federal, state and local level on climate change adaptation and resilience.
- **Risk assessment and operational planning:** A multi-year, comprehensive risk assessment process to prioritize infrastructure investments for longer term risks, such as sea level rise.
- **Staying abreast of the latest science:** An in-house climate change science team that regularly reviews the most relevant science and integrates its research into PG&E's risk assessment process.

We continue to make substantial investments to build a more modern and resilient gas and electric system that can better withstand extreme weather and natural disasters. PG&E's progress and perspective can be found in our Climate Change Vulnerability Assessment.

As California experiences one of the most severe droughts on record, we are working diligently to manage our water resources in a responsible manner and ease the drought's impact on customers, communities and our own operations. 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.

We also continue to engage with key stakeholder groups on climate adaptation, including the Bay Area Council, U.S. Department of Energy's Partnership for Energy Sector Climate Resilience and a variety of other forums at the local level in our service area.



Advancing climate change resilience

PG&E published our first Climate Change Vulnerability Assessment, examining our exposure to the forces of climate change, including flooding during severe storms, sea level rise, land subsidence, heat waves, changes in precipitation patterns and wildfire danger. Developed as part of PG&E's participation in the U.S. DOE's Partnership for Energy Sector Climate Resilience, the report describes the steps we are taking to prepare for altered climate conditions.



PG&E shares progress on climate resilience

PG&E participated in a climate change adaptation workshop, co-hosted by the California Energy Commission and California Public Utilities Commission, at which we shared our progress on climate change resilience. The event explored the physical vulnerabilities of California's gas and electric systems due to climate change and the actions that gas and electric providers like PG&E are taking to adapt to those changes.

2015 Milestones

In 2015, we continued to minimize our carbon footprint:

- **Increased renewable energy.** We remained on track to meet the state's requirement to deliver 33 percent renewable energy by the end of 2020. By the end of 2015, we reached nearly 30 percent. An additional 6 percent came from large hydroelectric power, which does not count toward the state's 33 percent requirement.
- **Reduced facility energy use.** We reduced energy use by 1.9 percent—spurred in part by employee participation in PG&E's Step Up and Power Down initiative, a behavior-driven energy savings campaign.
- **Reduced methane emissions.** We avoided the release of more than 144,000 metric tons of CO₂-equivalent emissions. These savings were achieved primarily through upgrades to gas pipelines and other infrastructure and implementing a technique called cross compression, where natural gas is transferred from one pipeline to another during pipeline construction and repair projects rather than releasing it into the atmosphere.
- **Continued to green our fleet.** We added new plug-in electric vehicles to our fleet and joined the Edison Electric Institute (EEI) in calling on our industry to direct 5 percent of total fleet investment, or approximately \$1 billion, toward plug-in electric vehicle technologies starting in 2015. PG&E plans to invest one-third of its annual fleet purchases on electric vehicles and plug-in hybrid vehicles over the next five years, totaling more than \$100 million.

Measuring Progress

Mandatory Emissions Reporting

Under AB 32's annual reporting requirements, PG&E reports greenhouse gas emissions to the ARB. 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.

In 2015, as part of California's cap-and-trade system, PG&E met a new compliance obligation associated with the emissions from the combustion of natural gas supplied to customers, excluding the fuel that is delivered to covered entities. The following table shows the greenhouse gas emissions data PG&E reported to ARB under AB 32.

**PG&E EMISSIONS REPORTED TO THE CALIFORNIA AIR RESOURCES BOARD:
CO₂ EMISSIONS FROM OWNED POWER GENERATION¹ AND OPERATIONS**

	2013	2014	2015
Total CO₂ Emissions (metric tons)	2,380,159	2,405,407	2,872,416
Humboldt Bay Generating Station	163,242	162,385	186,144
Gateway Generating Station	1,237,351	1,276,932	1,304,656
Colusa Generating Station	979,566	966,090	1,381,616
CO₂ Emissions Rates (lbs/MWh)			
Humboldt Bay Generating Station	997	1,023	1,010
Gateway Generating Station	857	868	868
Colusa Generating Station	852	857	853
Fossil Plants	863	873	868
All Plants ²	167	184	208
Other CO₂-e Emissions (metric tons)			
Natural Gas Compressor Stations ³	325,701	348,155	362,472
Distribution Fugitive Natural Gas Emissions	213,858	750,223 ⁴	669,472
Customer Natural Gas Use ⁵	43,506,493	41,616,935	43,022,557

1. PG&E's utility-owned generation comprised about 40 percent of our delivered electricity in 2015. PG&E also reported N₂O and CH₄ emissions from each of our generating stations.

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

3. Includes compressor stations emitting more than 25,000 metric tons of carbon dioxide-equivalent (CO₂-e) annually.

4. The increase in emissions between 2013 and 2014 was largely due to the inclusion of more sources in the mandatory reporting requirements, including customer meters and pipeline dig-ins. PG&E previously reported emissions from these sources only under its voluntary greenhouse gas emissions inventory.

5. Includes customer 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. This figure does not represent PG&E's compliance obligation under AB 32, which is equivalent to the above reported value less the combustion emissions from the fuel that is delivered to covered entities as calculated by ARB.

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 approximately one-third of the national average in 2014, the most recent year for which verified data are available. PG&E's emissions rate of 435 pounds of CO₂ per megawatt-hour of delivered electricity takes into account both PG&E-owned power generation and power purchased from third parties.

From year to year, several factors affect PG&E's power mix and emissions, including the availability of clean hydro power and flexibility of the power plants in our portfolio. Despite the slight year-over-year increase, PG&E's emissions continued a downward trend as we increase the share of renewables in our power mix.

PG&E also saw a slight year-over-year rise in total carbon dioxide emissions from electricity sales, increasing from 15.81 to 15.91 million metric tons, in addition to other variations.

ENCHMARKING GREENHOUSE GAS EMISSIONS FOR DELIVERED ELECTRICITY (Pounds of CO₂ per MWh)

U.S. Average ¹	1,137
Pacific Gas and Electric Company ²	
2014	435
2013	427
2012	445
2011	393
2010	445
2009	575
2008	641

1. Source: U.S. Environmental Protection Agency eGRID2012, which contains year 2012 information configured to reflect the electric power industry's current structure as of October 5, 2015.

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.

TOTAL GREENHOUSE GAS EMISSIONS BY SOURCE CATEGORY (Million Metric Tonnes CO₂-e)

	2012	2013	2014
Delivered Electricity ¹	16.52	15.81	15.91
Electricity Transmission and Distribution Line Losses	1.20	1.15	1.24
Customer Natural Gas Use	38.07	39.20	36.89
Process and Fugitive Emissions from Natural Gas Systems	1.08	0.87	1.10 ²
Gas Compressor Stations	0.37	0.33	0.35
Transportation	0.11	0.10	0.10
Facility Gas and Electricity Use	0.07	0.06	0.01
Sulfur Hexafluoride (SF ₆) from Electrical Equipment	0.06	0.07	0.02
Other Emissions	0.008	0.01	0.01
Total	57.49	57.61	55.69

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 primary driver for the reported increase in emissions can be attributed to improved measurement methods.

Lower hydropower availability due to persistent drought conditions in California and a greater reliance on power from the wholesale market led to an overall increase in PG&E's Scope 1 and Scope 2 greenhouse gas emissions. These emissions, from sources PG&E has direct control over—including owned power generation, fleet and our own electricity use—were just over 5 million metric tons CO₂-equivalent in 2014. Lower customer demand for natural gas was the primary driver for a decrease in Scope 3 emissions.

PG&E'S SCOPE 1, 2 AND 3 GREENHOUSE GAS EMISSIONS (Million Metric Tons CO₂-e)¹

	2012	2013	2014
Scope 1	4.11	3.77	4.00
Scope 2	1.26	1.20	1.29
Scope 3 ^{2,3}	52.12	52.63	50.40
Subtotal	57.49	57.61	55.69

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, as well as 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)

	2012	2013	2014
SF ₆ from Electrical Equipment	0.06	0.07	0.02
Facility Natural Gas Use	0.01	0.01	0.06
Gas Compressor Stations	0.37	0.33	0.35
Owned Fossil Generation	2.48	2.39	2.42
Process and Fugitive Emissions from Natural Gas System	1.08	0.87	1.10 ¹
Transportation	0.11	0.10	0.10
Total Scope 1 Greenhouse Gas Emissions	4.11	3.77	4.00

1. The primary driver for the reported increase in emissions can be attributed to improved measurement methods.

PG&E'S SCOPE 2 GREENHOUSE GAS EMISSIONS

(Million Metric Tons CO₂-e)

	2012	2013	2014
Electricity Transmission and Distribution Line Losses	1.20	1.15	1.24
Facility Electricity Use	0.06	0.06	0.05
Total Scope 2 Greenhouse Gas Emissions	1.26	1.20	1.29

PG&E'S SCOPE 3 GREENHOUSE GAS EMISSIONS

(Million Metric Tons CO₂)

	2012	2013	2014
Purchased Electricity (Net)	14.04	13.42	13.49
Customer Natural Gas Use ¹	38.07	39.20	36.89
Other Scope 3 emissions ²	0.01	0.01	0.01
Total Scope 3 Greenhouse Gas Emissions	52.12	52.63	50.40

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.

Assistance to Local Communities

PG&E provides data, financial assistance and technical support to local governments for the development of greenhouse gas inventories and climate action plans tailored to the unique needs of individual communities. The inventories include analyses of energy consumption, vehicle fuel use and waste production to provide a baseline for measuring future greenhouse gas reductions. Local and regional Climate Action Plans outline a set of policies, programs and ordinances necessary to meet greenhouse gas reduction goals at the local level.

PARTNERING WITH LOCAL COMMUNITIES¹

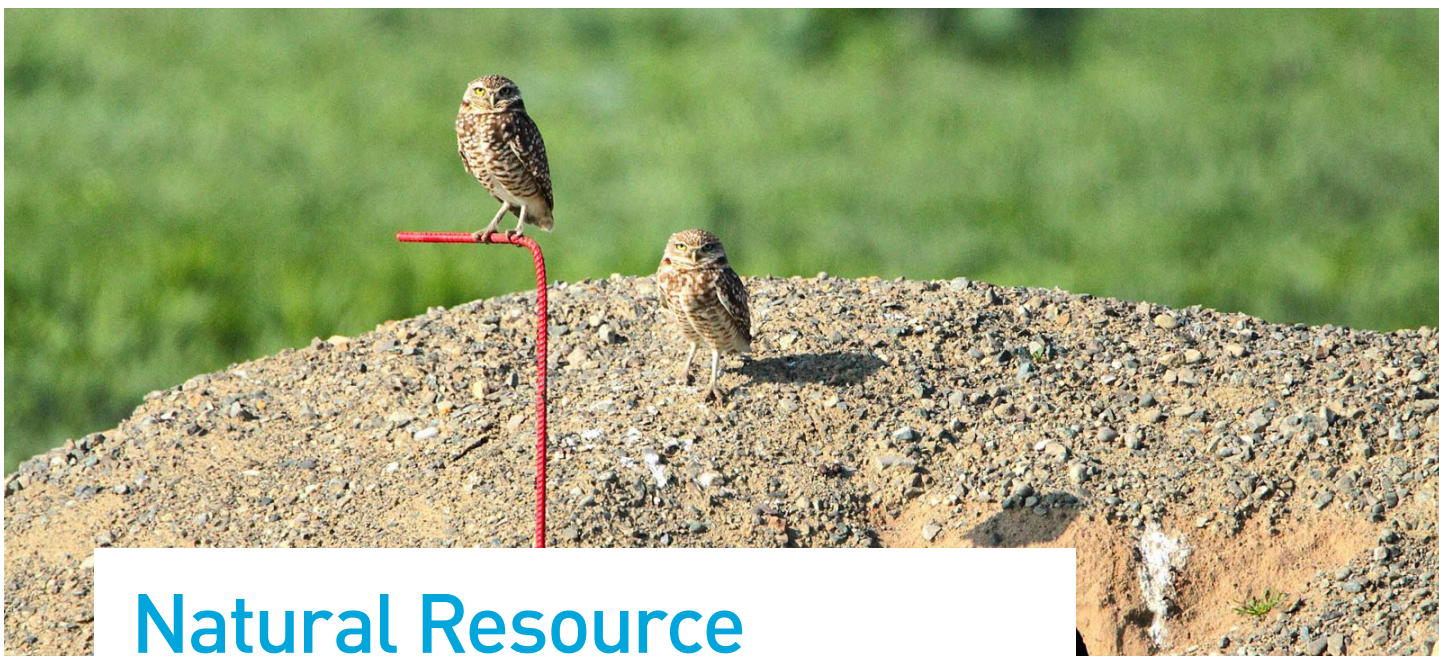
Cumulative number of greenhouse gas inventories supported (municipal and community-wide)	279
Cumulative number of Climate Action Plans supported	74

1. Data represent totals through 2015.

Looking Ahead

As we work toward a low-carbon future, PG&E remains on track to meet California's ambitious clean energy goals through renewables, energy efficiency and infrastructure investment, as well as support for distributed private resources and efforts to get more electric vehicles on the road.

We will continue to do our part to further reduce greenhouse gas emission levels in the energy sector. This includes our active engagement on state and local policy, such as California's ambitious greenhouse gas reduction target, and our continued focus on providing some of the nation's cleanest energy to our customers—including the option for customers to purchase up to 100 percent solar power through PG&E's Solar Choice program.



Natural Resource Stewardship

As one of the largest land owners in California, PG&E has a long history of managing lands and waters in a responsible and environmentally sensitive way. This includes protecting threatened and endangered species and their habitats, safeguarding watershed lands that PG&E has committed to preserve in perpetuity, maintaining forest lands to minimize the threat of wildfire and controlling vegetation around our overhead power lines so that customers experience fewer outages.

Our Approach

Minimizing Impacts of Our Operations

As we invest in our gas, electric and power generation facilities to meet customer needs, we recognize the critical importance of protecting threatened and endangered species and their habitats.

Examples of our efforts include:

- **Providing safe harbor for endangered species:** PG&E maintains Safe Harbor Agreements with the U.S. Fish and Wildlife Service for PG&E-owned land at three locations: Antioch Dunes National Wildlife Refuge in Contra Costa County, Tulare Hill in Santa Clara County and PG&E's hydro lands in Shasta County. These agreements enable our crews to safely maintain and operate infrastructure while enhancing habitat for the sensitive species. For example, we work with the U.S. Fish and Wildlife Service at Antioch Dunes to manage our property in ways that benefit the recovery of a number of protected species.

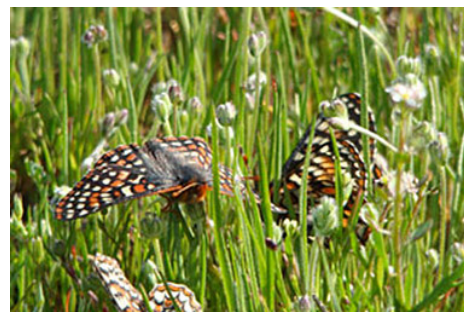


Photo by Andi Henke

- **Habitat Conservation Plans (HCPs):** In 2015, we marked the eighth year of our San Joaquin Valley Operations and Maintenance HCP, a 30-year permit covering our gas and electric operations and maintenance activities. The HCP covers 23 wildlife and 42 plant species while allowing PG&E to maintain and operate our facilities in a way that protects these sensitive species and the habitats in which they are found. PG&E also made significant progress on its second HCP, which upon regulatory approval will cover the nine-county San Francisco Bay Area.

Protecting Birds

PG&E's commitment to protecting birds is threefold: to comply with state and federal laws, protect migratory birds and improve system safety and electric service reliability for customers.

To meet these goals, we maintain a comprehensive Avian Protection Plan, which incorporates protection measures into new and reconstructed electric distribution facilities within designated raptor concentration zones. We also provide information, resources and training to improve employee knowledge and awareness about migratory birds.

We also have companion plans to augment our Avian Protection Plan:

- A Nesting Bird Management Plan to provide internal guidelines for operational and construction activities when working near active bird nests
- An Eagle Conservation Plan, under development in conjunction with the U.S. Fish and Wildlife Service, that aims to lead the industry in protecting eagles and other migratory birds, while also improving service reliability

Sustainably Managing Lands and Watersheds

PG&E works to manage our hydroelectric facilities in a manner that restores and enhances habitat for fish and other wildlife. We also maintain 52,000 acres of forestland in ways that help prevent the spread of wildfires, which include engaging nearby communities in wildfire prevention programs and collecting and storing seeds from PG&E forestlands for future restoration purposes.

In addition, as part of our Land Conservation Commitment, PG&E is permanently protecting some of California's most beautiful watershed lands—totaling more than 140,000 acres—through the donations of fee title and conservation easements on watershed lands to public agencies and qualified conservation organizations. Donees are identified by the Pacific Forest and Watershed Lands Stewardship Council, an independent nonprofit organization.

These land donations will enhance or preserve natural habitat for fish, wildlife and plants; preserve open space and outdoor recreation for the general public; and protect sustainable forestry, agricultural uses and historic and cultural values in perpetuity.

Vegetation Management

Each year, PG&E's Vegetation Management department and its contracting arborists and foresters inspect miles of power lines in our service area for public safety and electric reliability. We do so in compliance with relevant laws and with a focus on public involvement, including extensive "Right Tree, Right Place" outreach. PG&E has been recognized by the National Arbor Day Foundation as a Tree Line USA recipient for 21 consecutive years for demonstrating best practices in energy sector arboriculture.

PG&E responds in time of need

Following the devastating Valley and Butte Fires of 2015, PG&E led efforts to assist more than 570 landowners by removing large burned woody debris near houses and powerlines. Crews hauled over 92,000 logs and pieces of debris to locations where it could be processed for mill logs or biomass chips, at no cost to the landowner.

2015 Milestones

We continued to develop partnerships and new approaches to help us deliver safe and reliable service while protecting wildlife and other natural resources, including:

- **Continued to protect bees and other pollinators** by working with university and nonprofit researchers to understand how different vegetation management techniques within our electric transmission rights-of-way could benefit pollinators. Preliminary results show that integrated vegetation management techniques designed to support safety and reliability also create conditions that benefit native bees. Further research results are expected in 2016. PG&E is also a supporter of the nonprofit Pollinator Partnership, which allows beekeepers access to bee forage on our corporate lands and is a founding member of Business for Bees—American Business Collaboration for Pollinator Conservation Action.
- **Completed our third Safe Harbor Agreement** to aid in the recovery of the Shasta crayfish. PG&E signed the voluntary agreement with the U.S. Fish and Wildlife Service and the California Department of Fish and Wildlife to provide a safe haven for the Shasta crayfish, a critically endangered species with an estimated population of 2,200 remaining. This agreement is the first joint federal and state Safe Harbor Agreement in California, and PG&E's first on our hydro lands.
- **Permanently protected land** by transferring fee title to 920 acres in Amador County to the U.S. Forest Service and 41 acres along the Yuba River to the University of California as part of our Land Conservation Commitment. An additional 2,178 acres of PG&E property were placed under five separate conservation easements, permanently protecting them.
- **Earned renewed accreditation** from the Wildlife Habitat Council's Corporate Lands for Learning for our Diablo Canyon Land Stewardship Program, which recognizes our wildlife habitat management and environmental education programs. PG&E manages and protects natural resources on more than 14 miles of coastline surrounding the nuclear power plant and opens the land to researchers and the public. PG&E has earned "Wildlife at Work" certification for five additional sites.
- **Offered an online reservation system for our recreational areas**, making it easier to reserve recreational areas and campsites at more PG&E campgrounds. More than 70 percent of our campsites can now be reserved online. PG&E is required to maintain campgrounds and picnic areas at many of the reservoirs that are part of our hydroelectric system, and visitors can now easily browse photos and descriptions of these sites and reserve them online.

PG&E partners with National Fish and Wildlife Foundation to restore habitat

PG&E volunteers in Cupertino helped restore a riparian meadow at McClellan Ranch Preserve, which is increasingly threatened by urban growth. The effort was part of PG&E's Nature Restoration Trust, a collaboration between PG&E and the National Fish and Wildlife Foundation. PG&E and the foundation contributed \$18,000 toward the restoration effort at McClellan Ranch, which is also home to a creek that supports threatened populations of steelhead trout.

Measuring Progress

PG&E engages in a wide variety of restoration and habitat protection activities to fulfill state and federal regulatory requirements, and to support voluntary environmental initiatives. In 2015, our efforts protected or restored 4,068 acres of habitat and 8.6 miles of stream and river riparian vegetation.

PROTECTED AND RESTORED HABITAT¹

	2013	2014	2015
Acres set aside and protected	253.8 acres	259.3 acres	3,336.8 acres
Acres of restored habitat	236.5 acres	1,539.3 acres	731.3 acres
Miles of stream and river riparian vegetation protected	6.4 miles	11.6 miles	8.6 miles

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

Protecting Birds

Since 2002, PG&E has made approximately 28,900 existing utility poles and towers bird-safe. In that time, we have also retrofitted more than 32,200 utility poles in areas where bird injuries, fatalities or bird-related power outages have occurred. All new poles and replacement poles in our designated “Raptor Concentration Zone” are also built to be bird-safe.

BIRD PROTECTION PROGRAM (Bird-Safe Retrofits)			
	2013	2014	2015
Poles Planned	2,000	2,000	2,000
Poles Completed	2,068	2,089	2,161
% Poles Completed	103%	104%	108%

PG&E delays construction project after discovery of golden eagles

As a PG&E crew of electric line workers was about to begin a two-week project in Contra Costa County to move power lines from one side of the road to another, they saw golden eagles in the vicinity of the construction site. They consulted PG&E’s Avian Protection Program manager and alerted the county and the U.S. Fish and Wildlife Service. The work was suspended until the young eagles left the nest and the crew was cleared to proceed.

Looking Ahead

As part of our environmental commitment, we will continue to minimize the impacts of our operations on sensitive habitat and species. This includes collaborating with federal, state and local stakeholders, as well as other energy companies, to benchmark and implement best practices so that we can manage lands and waters in a responsible and environmentally sensitive way.

In addition, with drought conditions improving but persistent, California continues to face an increased risk of wildfires. In response, we have taken many proactive measures, including air patrols of specific stretches of land and safely removing or pruning dead or dying trees in fire-prone areas.



PG&E Partners with CAL FIRE to combat bark beetles during drought

PG&E supported CAL FIRE’s “Prepare for Bark Beetle” public awareness campaign by increasing inspections and pruning or removing hazardous trees around our power lines. We also provided funding to support CAL FIRE’s outreach to inform homeowners about the wildfire risk posed by bark beetles and how to safely take action.



Water and Drought Response

When drought conditions intensify, as they have in recent years in California, the ripple effect can be felt throughout our state. Given limited water supplies, we work to conserve water at PG&E facilities and in our operations, and to help our customers do the same, particularly in the agricultural sector. With the increased fire risk, we are also assisting the state and local communities in their efforts to prevent and protect against wildfires.

Our Approach

PG&E's response to the state's historic drought conditions is governed by an internal Drought Task Force, which works to identify and address impacts on PG&E's operations, on our customers and in our communities. The strong link between energy and water usage means that there is much we can do.

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 19 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 working proactively to respond to the drought in a number of ways:

- Strategically managing our power generation facilities
- Reducing water consumption at PG&E offices and service yards
- Coordinating with key agencies to prevent and respond to wildfires
- Outreach and guidance to customers, particularly those in the agricultural community, on how to reduce water usage

Water Use at Diablo Canyon

PG&E does not use freshwater for cooling at any of our power plants. At the Diablo Canyon Power Plant, we use saltwater from the Pacific Ocean for once-through cooling. The 2,240 MW nuclear power plant has 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.

In May 2014, EPA issued federal regulations under Section 316(b) of the Clean Water Act to minimize adverse environmental impacts from facilities that use once-through cooling. These regulations allow Diablo Canyon to continue to be regulated under California's once-through cooling policy adopted in 2010, which is considered to be at least as stringent as the new federal regulations. At the state level, the California Water Board has adopted a policy on once-through cooling that generally requires the installation of cooling towers or other significant measures to reduce the impact on marine life from existing power generation facilities in California by at least 85 percent.

Diablo Canyon must comply with state policy by December 31, 2024. However, nuclear facilities may be granted an alternative to the compliance requirements if they meet certain cost and technical feasibility criteria. An alternative technologies assessment was completed in 2014 by Bechtel, with oversight by the nuclear review committee established by the State Water Resources Control Board. Given PG&E's announcement of a joint proposal indicating that, pending CPUC approval, we would not seek to relicense Diablo Canyon at the end of our existing nuclear licenses, we will comply with the state's policy without approval of alternative compliance requirements and pay an annual interim mitigation fee until the units cease operation.

In addition, PG&E uses an on-site desalination plant to generate the majority of freshwater for Diablo Canyon to support the internal operations of the facility.

Dry Cooled Conventional Sources

PG&E relies on air for cooling at its three natural gas power plants:

- Humboldt Bay Generating Station is cooled with air radiators using a closed-loop liquid coolant and requires minimal water use.
- Gateway Generating Station employs an air-cooled condenser, which uses approximately 97 percent less water and discharges 98 percent less wastewater than a traditional once-through cooled plant.
- Colusa Generating Station also uses dry cooling and a zero liquid discharge system that recycles wastewater.

PG&E uses some freshwater for internal operations at the plants, but these are largely closed-loop systems that minimize the amount of water consumed.

Hydroelectric Generation

PG&E owns and operates the nation's largest investor-owned hydroelectric system. Our hydroelectric power plants are largely non-consumptive, meaning that after water passes through turbines to produce electricity, it is returned to the river.

PG&E also uses water for energy storage to help balance daily variations in electric demand at the 1,212 MW Helms Pumped Storage Project. Located more than 1,000 feet inside the Sierra Nevada mountains, the non-consumptive Helms facility alternately dispatches water from an upper reservoir to a lower reservoir to produce electricity when demand is high, pumping it back uphill when demand is low.

PG&E earns U.S. Green Building Award

PG&E was presented with the U.S. Green Building Award for the innovative water reuse system at our San Francisco Service Center Garage Building. The site achieved LEED Platinum after a remodel and seismic retrofit. As part of the remodel, we created a system to capture groundwater from an aquifer that runs under the building and use it for the building's cooling system.

Technology demonstration and deployment

PG&E operates the Potter Valley Hydroelectric Project under a FERC license that requires minimum flows downstream from Lake Pillsbury, a storage reservoir, to protect Chinook salmon and steelhead populations in the Eel River watershed and for agricultural and domestic water use in the Russian River watershed. However, as our state's drought persisted, Lake Pillsbury became perilously dry, threatening our ability to provide water for these important uses.

In response, PG&E created the Lake Pillsbury Drought Working Group, comprised of stakeholders in both the Eel River and Russian River watersheds, which collaborated to conserve water in Lake Pillsbury and ensure a water supply for both watersheds. Without the working group, storage levels in Lake Pillsbury would have dropped below critical levels and led to water curtailment.

Water Conservation in Our Facilities

PG&E's offices and service centers rely on water for restrooms, kitchens, mechanical system cooling, vehicle washing and landscape irrigation. As the drought in California continued in 2015, PG&E stayed committed to conserving water at our facilities. Our efforts proved positive, with water use decreasing 7.8 percent compared to the prior year, exceeding our target of 4.5 percent. This was in addition to the 30 percent reduction we achieved over the previous five years.

We accomplished these reductions by finding and repairing leaks and replacing facility landscapes with drought-resistant designs, plants and materials. Outside 60 of our facilities, browning lawns displayed signs supporting the state's Save Our Water drought message.



Promoting drought awareness

We posted "Severe drought warning" signage at 200 buildings as well as at PG&E's campgrounds located near our hydroelectric facilities.

Helping Customers Reduce Water Use

PG&E offers customers a wide range of options to help them reduce their water use. Our water-saving solutions for residential customers include energy efficiency rebates for high-efficiency appliances, such as clothes washers and shower heads, and free wood chips for landscape mulching, which reduces evaporation. 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.

Altogether, customers who participated in PG&E's programs reduced water usage by about 1.2 billion gallons in 2015, based on an analysis of our most common energy efficiency measures that deliver water savings. This was down from the 1.8 billion gallons of water saved in 2014, with the decrease primarily related to our program to help customers convert their sprinkler systems to drip irrigation alternatives. The sprinkler-to-drip conversion program is still available for field crops but was sunset in 2015 for tree-grown crops and vineyards, which substantially reduced the water savings recorded.



PG&E partners on Save Our Water campaign

PG&E placed a "Save Our Water" message on bills and envelopes sent to 4 million customers. Our 1.7 million e-bill customers received the drought message in e-bill inserts.

2015 Milestones

As the drought persists, PG&E continues to partner to conserve water and protect the watersheds where we operate. Our achievements in 2015 included:

- **Conserved water at PG&E facilities.** We reduced water use by 7.8 percent compared to the prior year, which exceeded our 4.5 percent target. This was in addition to the 30 percent reduction we achieved over the previous five years.
- **Engaged our employees.** PG&E led a grassroots Water Wise Pledge Campaign that encouraged employees to make a pledge to reduce their water usage at work and at home. Twenty percent of our workforce pledged to take actions such as taking shorter showers, checking for leaks and installing water-saving aerators.
- **Strategically managed our hydroelectric facilities.** Working with state agencies and other stakeholders, we found ways to save water in our reservoirs so we could generate power during the summer peak periods. Conserving water early in the season also helps ensure adequate water supplies for communities, supports recreation and benefits the many species that depend on water.
- **Took new steps to prevent and mitigate wildfires.** In addition to our routine vegetation management program, through which we inspect all of our overhead electric lines, PG&E provided \$2 million in funding to local Fire Safe Councils for projects including creating emergency access roads and fire breaks, clearing fire fuel and helping residents create defensible space. PG&E also provided funding for daily aerial fire patrols along four routes to assist state and local fire agencies with early detection and response to stop fires from spreading. We conducted supplementary patrols of our power lines in high fire danger areas—nearly 54,000 miles of power lines—and removed 124,000 hazardous trees that have been killed by a combination of the drought and bark beetle.
- **Expanded agricultural energy efficiency programs and incentives.** We continue to develop rebates and incentives on water and energy-saving appliances and equipment for our agricultural customers, including pump efficiency, variable frequency drives and energy efficiency financing. We are developing new approaches for managing irrigation and using audits to recommend energy and water conservation for food processing facilities. We are also helping customers replace sprinklers for field crops with more water efficient drip systems.

Measuring Progress

WATER USE STATISTICS			
	2013	2014	2015
Water Withdrawal (Saltwater and Freshwater) (thousand gallons)			
Water Withdrawal (Saltwater)			
Diablo Canyon Power Plant ¹	845,930,015	852,781,935	861,064,313
Once-Through Cooling	845,609,000	852,463,000	860,732,000
Seawater Withdrawal for Reverse Osmosis	321,015	318,935	332,313
Domestic and Process Water (Freshwater)			
Diablo Canyon Power Plant ²	21,400	17,930	8,150
Humboldt Bay Generating Station ¹	193	168	208
Gateway Generating Station ¹	14,893	20,726	21,320
Colusa Generating Station ¹	32,321	18,877	25,473
Facilities (Freshwater)			
Offices and Service Yards ³	127,208	106,708	106,142
Permitted Water Systems ⁴	66,912	63,231	110,784
Hydrostatic Testing (Freshwater)			
Water Withdrawal	6,166	5,974	5,537
Water Discharged (Saltwater and Freshwater) (thousand gallons)			
Water Discharge (Saltwater)⁵			
Diablo Canyon Power Plant	845,798,691	852,651,462	860,928,367
Domestic and Process Water (Freshwater)			
Diablo Canyon Power Plant (Permitted Discharge)	141,469	140,223	140,405
Humboldt Bay Generating Station (Sanitary Sewer)	73	80	114
Gateway Generating Station (Sanitary Sewer)	8,603	10,395	10,153
Colusa Generating Station ⁶	0	0	0
Hydrostatic Testing (Freshwater)			
Total Discharge ⁷	2,132	4,120	2,798

1. Net operating capacity on December 31, 2015: Diablo Canyon: 2,240 MW; Humboldt Bay Generating Station: 163 MW; Gateway Generating Station: 580 MW; Colusa Generating Station: 657 MW.

2. Freshwater sources are well water for backup and emergency purposes.

3. This figure represents the water supplied to offices and service yards managed by the Utility's Corporate Real Estate Strategy and Services department for the 12-month period from October to September. The data includes between 125 and 135 sites between 2013 and 2015.

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 incorporate once-through cooling discharge (equivalent to withdrawal) 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. Of these totals, a portion of water was reused for other hydrostatic testing prior to being discharged, and more than half was recycled or reused for irrigation or dust control.

Looking Ahead

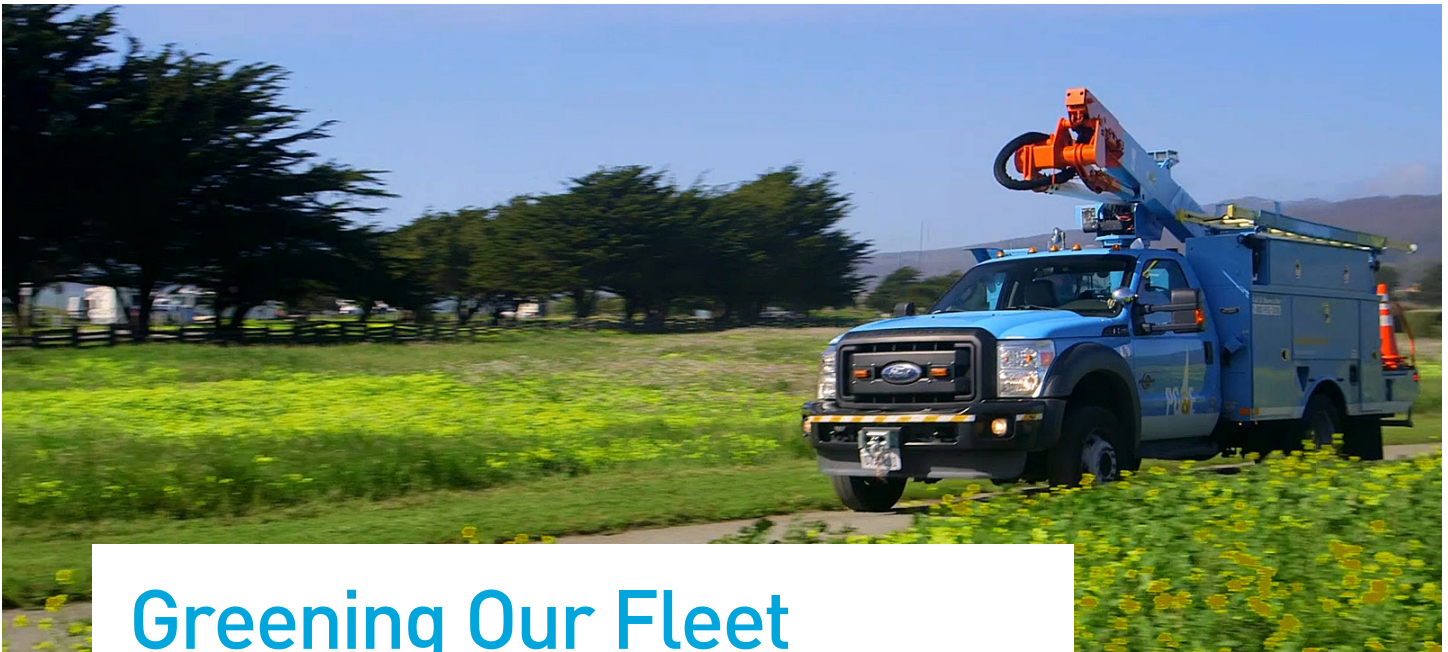
As drought conditions persist across California, PG&E will continue to promote water conservation with our customers and communities and at our facilities, setting a target reduction of 3.5 percent. We will step up our wildfire prevention efforts—pruning or removing approximately 1.1 million trees in 2016 to prevent them from growing or falling into power lines. We will also continue to strategically manage our hydroelectric operations and coordinate with business and government partners to reduce drought impacts in our state.



PG&E hosts Water Conservation Showcase

PG&E held a Water Conservation Showcase at our Pacific Energy Center in San Francisco, bringing together hundreds of industry professionals to hear from experts and engage with new technologies. For PG&E, the event is an extension of the company's focus on energy efficiency and sustainability, highlighting the direct connection between water and energy use.

Photo by James Green



Greening Our Fleet

PG&E's fleet of more than 14,000 vehicles is one of the cleanest in the industry—and we're making it cleaner every year. By integrating the latest technology available and innovating to meet opportunities unique to our fleet operations, PG&E supports local businesses, reduces emissions and operating costs, and expands our portfolio of low-emission vehicles, from hybrid-electric bucket trucks to compressed natural gas vehicles.

Our Approach

PG&E's commitment to a clean fleet begins with exceeding federal and state vehicle emissions and alternative fuel requirements. To do so, we are making significant investments in new vehicle technologies.

Federal regulations require that 90 percent of all light-duty vehicles purchased for our fleet be capable of using an alternative fuel—such as electricity or compressed natural gas—provided 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 will meet or exceed 2007 standards for particulate levels by the end of 2016, and 2010 standards for nitrogen oxide emissions by the end of 2017. PG&E is well on our way to meeting this goal: 99 percent of our fleet is already compliant with the 2007 standards, while more than 80 percent is compliant with the 2010 standards.



PG&E pledges \$100 million toward clean fleet

PG&E announced plans to invest one-third of its annual fleet purchases in electric vehicles and plug-in hybrid vehicles over the next five years, totaling more than \$100 million. This will add more than 750 plug-in vehicles—roughly double the current pace—and more than 150 electric vehicles to PG&E's fleet.

2015 Milestones

Over and above the reduced carbon footprint and lower tailpipe emissions, PG&E has found that electric vehicles (EVs) offer a wide range of additional benefits, from lower operating costs for fuel and maintenance to extended vehicle life to quieter operations while working in our communities. Last year, PG&E invested in a number of new vehicles and technologies to green our fleet. Among other efforts, we:

- **Expanded use of export-power bucket trucks.** Exportable power allows a truck to power buildings or homes in a neighborhood—essentially storing and redeploying PG&E's clean energy. Upgrades in export power technology in 2015 reduced both the size and weight of the system, allowing it to fit onto additional PG&E trucks. By the end of 2015, PG&E had seven export-power vehicles capable of exporting up to 120 kW of utility-grade power.
- **Supported communities in need.** During several wildfires, PG&E provided exportable power trucks to support evacuation centers and allow residents to charge cell phones and personal devices. PG&E also used the vehicles to help lighting efforts at the evacuation centers so that food service and other important activities could be well-lit for the community.
- **Integrated driver feedback technology in multiple ways.** We installed Telogis telematics in more than 1,000 vehicles and pieces of equipment. In-cab alerts enabled on most of these vehicles can indicate hard braking, hard acceleration and exceeding the speed limit, among other factors. Drivers are able to view their score on a linked smartphone app. This driver feedback promotes safe driving behavior and fuel efficiency, and we plan to install more than 5,000 additional units in 2016.
- **Rolled out more idle mitigation technologies.** PG&E worked with Altec to develop a new lithium-ion-based job energy management system (JEMS) with partner ZeroRPM for our Class 5 bucket truck. The system cuts vehicle weight, increases efficiency and will lead to more idle-free hours at the worksite. It automatically shuts off the diesel engine whenever the vehicle is in park while still providing heating, cooling and accessory power.

Measuring Progress

PG&E managed approximately 14,600 on-road vehicles and associated equipment at the end of 2015. Of those, about 1,500 were electric-based, 300 were powered by CNG and 1,200 were fueled by biodiesel. Our network of electric charging stations is also growing: last year we reached more than 600 charge points at about 90 locations across our service area.

We also maintain a network of 32 CNG 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.



PG&E, Edison Electric Institute urge energy industry to add more electric fleet vehicles

PG&E joined with EEI to urge gas and electric providers to more than double their current investments in electric utility fleet vehicles—a goal that represents an estimated \$50 million of new investment in electric vehicles across the industry. PG&E and EEI called on companies to invest 5 percent of their total fleet investment, approximately \$1 billion in total, starting in 2015. PG&E has committed to reaching 20 percent capital spend on electrified vehicles. This includes continuing to purchase the Chevrolet Volt when replacing passenger cars and adding the JEMS system to specific bucket-truck models.



PG&E plugs into the energy technology of the future

At VERGE in San Jose, a PG&E plug-in hybrid bucket truck—one of the newest additions to our clean fleet—delivered power from an onboard battery pack into a temporary microgrid built for the conference. Watch a video on how the VERGE microgrid came together.

Fuel Use Statistics

PG&E uses petroleum and biodiesel 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			
	2013	2014	2015
Petroleum Consumed by PG&E Fleet (gallons)	9,840,447	10,182,712	11,173,337
Biodiesel Consumed by PG&E Fleet (gallons) ¹	175,724	175,809	160,973

1. Reported as B100 gallons.



PG&E unveils 'connected' truck

PG&E introduced a bucket truck that features solar panels and internet connectivity via a mobile hot spot. Developed in partnership with Altec Incorporated and Telogis, the Class 5 bucket truck offers a glimpse of the very near future. Combining next-generation electric power take-off technology and "vehicle-as-a-hub" communications technology, the vehicle will improve operating efficiency while enhancing safety and productivity.

Photo by Jason King

Looking Ahead

PG&E will continue to look for opportunities to use new and emerging technologies in building a smarter, cleaner fleet of vehicles, while exceeding state and federal emissions regulations.

This includes increasing the use of the JEMS battery-powered system across our fleet and adding more idle mitigation technologies to reduce fuel consumption and vehicle noise. In addition, by adding Telogis telematics to vehicles, we can gain deeper insight into how equipment is being used and how trucks are performing.

As a member of the U.S. DOE Workplace Charging Challenge, PG&E also continues to increase EV charging access for both fleet and employee vehicles, with plans to add about 150 charge points per year over the next three years.

We will also continue to work with industry, regulators, automakers and other partners to promote the transition to alternative fuel vehicles. This commitment includes our engagement with EEI to help speed the incorporation of plug-in electric technologies into vehicle fleets. We will also continue to promote CNG, liquefied natural gas (LNG) and hydrogen for heavy-duty truck and marine transportation.



Buildings and Facilities

Our focus on responsible practices at PG&E extends to our buildings and facilities, where we are working to reduce our environmental footprint through reduced water and energy usage and increased waste diversion. Our efforts rely on the engagement and participation of all employees, including a network of grassroots volunteers who train their colleagues in best practices and the impact they can have at work.

Our Approach

Energy, Water and Waste Reduction

We continue to execute a multifaceted strategy to invest in key facility improvements, engage employees and incorporate sustainability principles and continuous improvement into all aspects of our real estate management. In 2015, we set new annual targets for reducing energy, water and landfill waste in our office facilities and service yards. We also set a goal to achieve top-decile performance in facility energy and water reduction among industry peers by 2020, as part of PG&E's climate pledge under the Obama Administration's American Business Act on Climate initiative.

We committed for all of PG&E's operations service centers—nearly 100 facilities in Northern and Central California—to be powered by solar energy through PG&E's Solar Choice program, which enables customers to purchase up to 100 percent of their electricity from solar projects in PG&E's service area.

We also continue to pursue Leadership in Energy and Environmental Design (LEED) certification for new buildings and large remodel projects, guided by a set of healthy building standards and practices to help us improve indoor air quality, generate less waste and increase operational efficiency over the lifespan of our facilities.

Hazardous and Other Waste

In the normal course of business, our operations generate certain hazardous wastes. Waste is also created during the remediation and cleanup of historic legacy sites.

PG&E manages all hazardous waste in accordance with federal and state regulations. Our comprehensive approach includes providing guidance and training to employees to reduce waste and ensure it is properly managed from the point of generation to its ultimate disposal or recycling.

Federal hazardous waste management statutes include the Resource Conservation and Recovery Act and the Toxic Substances Control Act. In addition, our operations are subject to California's hazardous waste management laws and regulations, which are more stringent and encompass a broader scope of waste streams. For example, wastes such as used oil are subject to California's hazardous waste requirements.

2015 Milestones

Highlights of our efforts at office facilities and service yards include:

- **Reduced water use by 7.8 percent compared to 2014, exceeding our target of 4.5 percent.** We remained focused on repairing leaks, managing irrigation systems, installing low-flow plumbing fixtures and replacing landscaping with drought-resistant approaches. Our San Francisco Service Center earned a U.S. Green Building Council award for innovative systems that capture ground water for cooling and grey water for toilets.
- **Reduced energy use by 1.9 percent compared to 2014, falling short of our 2.5 percent target,** primarily due to higher than expected natural gas use for heating late in the year. PG&E's Step Up and Power Down initiative, an employee behavior-driven energy savings campaign, contributed to our gains. We also achieved reductions through upgrades, such as installing LED exterior lighting, and by adopting energy efficient designs during major remodel projects.
- **Reached a 79 percent waste-diversion rate, slightly below our 80 percent target.** Engaging employees in a friendly waste competition was key to our efforts—as was ensuring yard bins were the right size and adding composting and single-stream recycling at more locations.
- **Achieved LEED certification for nearly 40 percent of our facility square footage.** Our work in this area continues, with more than 20 LEED-certification projects in progress, including nine major remodel and new construction projects.
- **Offered a vehicle charging program for employees who drive their EVs to work.** We have installed more than 180 Level 2 chargers at our facilities, which provide up to 25 miles of range for every hour of charging, with plans to install about 235 more in 2016.



Supporting Solar Choice

All of PG&E's operations service centers—nearly 100 facilities in Northern and Central California—are powered completely by solar energy through our Solar Choice program.

Measuring Progress

PROGRESS TOWARD PG&E'S ENERGY, WATER AND WASTE REDUCTION GOALS

	2009-2014 Composite Total	2015 Target	2015 Actual	2016 Target
Energy Reduction ¹	16.4%	2.5%	1.9%	2.0%
Water Reduction ²	30.4%	4.5%	7.8%	3.5%
Waste Diversion Rate ³	81%	80%	79%	80%

1. The energy reduction goal is measured in million BTUs (MMBtus) and is displayed in the table as a percentage reduction in MMBtus. The metric included between 156 and 168 sites from 2010 to 2014 and measured 171 sites in 2015.

2. The water reduction goal is measured in gallons. The metric included between 91 and 135 sites from 2010 to 2014 and measured 133 sites in 2015.

3. The waste diversion rate measures the diversion rate in the final quarter of each year for all non-hazardous waste at 115 sites covered by the California Mandatory Recycling regulation.

In 2015, PG&E continued to reduce energy and water use and to achieve high rates of waste diversion at office facilities and service yards. For 2016, we adjusted our methodology to measure energy and water reduction on a square-foot basis to facilitate improved benchmarking. Our goals are to reduce energy use by 2 percent, water use by 3.5 percent and achieve an 80 percent waste-diversion rate. In addition, we are working across departments to find opportunities to reduce the total amount of waste generated.

Energy Consumption Statistics

These figures represent electricity and natural gas usage at 171 facilities managed by our Corporate Real Estate Strategy and Services department.

ENERGY CONSUMED ¹			
	2013	2014	2015
Electricity Consumed (Gigawatt hours)	78	73	76
Natural Gas Consumed (Million cubic feet)	119	101	99
Energy Intensity (Million BTUs per square foot) ²	60	58	54

1. The data reflects the 12-month period from December to November and is normalized for weather.

2. Figures are reported in the industry standard of BTU per square foot, which incorporates all of the energy used in a facility into one comparative number.

Water Use Statistics

In 2015, we made continued progress toward quantifying our “water footprint.” Please see the Water and Drought Response section for statistics on PG&E’s water usage.

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. These figures represent the total waste diverted from the landfill at 115 sites managed by our Corporate Real Estate Strategy and Services department.

Other waste reduction efforts included:

- Recycling nearly 27 million pounds of scrap iron, aluminum and copper from conductors, meters and miscellaneous material. We also recycled nearly 1.1 million pounds of recovered meters, 15.9 million pounds of transformers and 312,000 pounds of plastic, including pipes and hard hats.
- Recycling 244 tons of e-waste, including consumer electronic devices, CPUs, monitors, servers, printers and other equipment.
- Recycling more than 208,000 pounds of steel, copper and lead from the Humboldt Bay Power Plant and the Diablo Canyon Power Plant.

WASTE DIVERSION AT FACILITIES ¹	
	2015
Total Waste Generated (tons)	24,390
Total Waste Diverted (tons)	19,392
Waste Diversion Rate ²	79%

1. The tonnage data reflects all of the non-hazardous municipal waste at 115 sites managed by PG&E’s Corporate Real Estate Strategy and Services department for the 12 months from October 2014 to September 2015.

2. The percentage reflects the diversion rate in the final quarter of the metric year.

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			
	2013	2014	2015
Total Hazardous Waste (tons)	22,234	28,164	78,750
RCRA ¹ Hazardous Waste	1,570	1,391	1,747
TSCA ² Hazardous Waste	2,901	885	1,082
California Regulated Hazardous Waste	17,763	25,888	75,921 ³
Federal Regulated Hazardous Waste (TSCA)—PCB Waste ≥ 50 ppm PCB (tons)			
Total	2,901	885	1,082
Incineration	204	250	205
Landfill	2,697	504	804
Recycled	0	131	73
% Recycled	0%	14.8%	6.7%
California Regulated Hazardous Waste (Non-RCRA)⁴ (tons)			
Total	17,763	25,888	75,921
Disposed	12,539	17,860	64,254
Recycled	5,224	8,028	11,667
% Recycled	29.4%	31.0%	15.4%
Other Waste			
Universal Waste (tons)			
Total	199	268	488
Recycled	199	268	488
% Recycled	100%	100%	100%
Low-Level Radioactive Waste Disposed (cubic feet)			
Diablo Canyon Power Plant	2,630	810	947
Humboldt Bay Power Plant	13,404	18,966	60,814
Radioactively Cleared Waste Disposed (pounds)			
Diablo Canyon Power Plant	167,871	291,728	169,577
Humboldt Bay Power Plant	5,429,786	12,586,215	27,846,637
Recycled Materials from Power Plants (pounds)			
Diablo Canyon Power Plant			
Steel	31,649	18,167	0
Copper	1,450	0	12,404
Lead	N/A	3,007	0
Humboldt Bay Power Plant			
Steel	120,340	129,940	160,820
Copper	12,500	0	0
Lead	0	17,305	35,100

1. Refers to the Resource Conservation and Recovery Act (RCRA).

2. Refers to the Toxic Substances Control Act (TSCA).

3. The increase in hazardous waste was largely driven by PG&E's remediation at some larger-scale remediation sites.

4. These figures include polychlorinated biphenyl (PCB) waste < 50 ppm PCB.

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 EMISSIONS ¹			
	2013	2014	2015
Total NO_x Emissions (tons)	153	141	160
Humboldt Bay Generating Station	23	25	30
Gateway Generating Station	78	80	79
Colusa Generating Station	52	36	50
NO_x Emissions Rates (lbs/MWh)			
Humboldt Bay Generating Station	0.04	0.15	0.15
Gateway Generating Station	0.05	0.05	0.05
Colusa Generating Station	0.04	0.03	0.03
Fossil Plants	0.05	0.05	0.04
All Plants	0.01	0.01	0.01
Total SO₂ Emissions (tons)	17	14	17
Humboldt Bay Generating Station	1	1	1
Gateway Generating Station	11	8	8
Colusa Generating Station	5	5	8
SO₂ Emissions Rates (lbs/MWh)			
Humboldt Bay Generating Station	0.004	0.004	0.005
Gateway Generating Station	0.007	0.005	0.005
Colusa Generating Station	0.004	0.004	0.004
Fossil Plants	0.005	0.005	0.005
All Plants	0.0011	0.001	0.001
Total Particulate Matter Emissions (tons)	95	92	108
Humboldt Bay Generating Station	44	45	49
Gateway Generating Station	25	23	23
Colusa Generating Station	25	25	35
Total CO Emissions (tons)	45	39	48
Humboldt Bay Generating Station	15	20	29
Gateway Generating Station	10	9	7
Colusa Generating Station	20	10	12
Total VOC Emissions (tons)	59	53	61
Humboldt Bay Generating Station	41	40	46
Gateway Generating Station	11	8	8
Colusa Generating Station	7	5	6

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 2013 to 2015.

Looking Ahead

Our environmental goals are based on promoting a safe and healthy workplace and making our facilities more sustainable over time using LEED green building standards. This approach is central to achieving our 2020 goal to be top decile among industry peers in energy, water and waste reduction.



New Stockton Regional Office a vision in energy efficiency and green building

We opened our Stockton Regional Office—with solar panels that provide 30 percent of the building's power usage, electric vehicle charging stations and a display home to educate visitors on zero net energy.

Congressman Jerry McNerney presents PG&E Chief Customer Officer Laurie Giammona with a resolution and U.S. flag commemorating the grand opening of the new Stockton Regional Office.



Supplier Sustainability

PG&E's commitment to sustainability influences how we assess and manage our supply chain priorities and processes. It is an important factor in our product and service choices and in the selection and management of suppliers. Our initiative to improve supply chain environmental sustainability supports our goal of environmental leadership and our mission to deliver safe, reliable, affordable and clean energy.

Our Approach

Driving Strong Supplier Engagement and Performance

Since 2007, we have encouraged environmental responsibility, excellence and innovation among our suppliers. Our approach focuses on advancing the performance of our top-tier suppliers—approximately 100 critical firms that represented about 60 percent of PG&E's spend in 2015.

We expect our top-tier suppliers to follow a set of Supplier Environmental Performance Standards. These standards encourage performance improvement and promote greater transparency and accountability by setting the expectation that all top-tier suppliers:

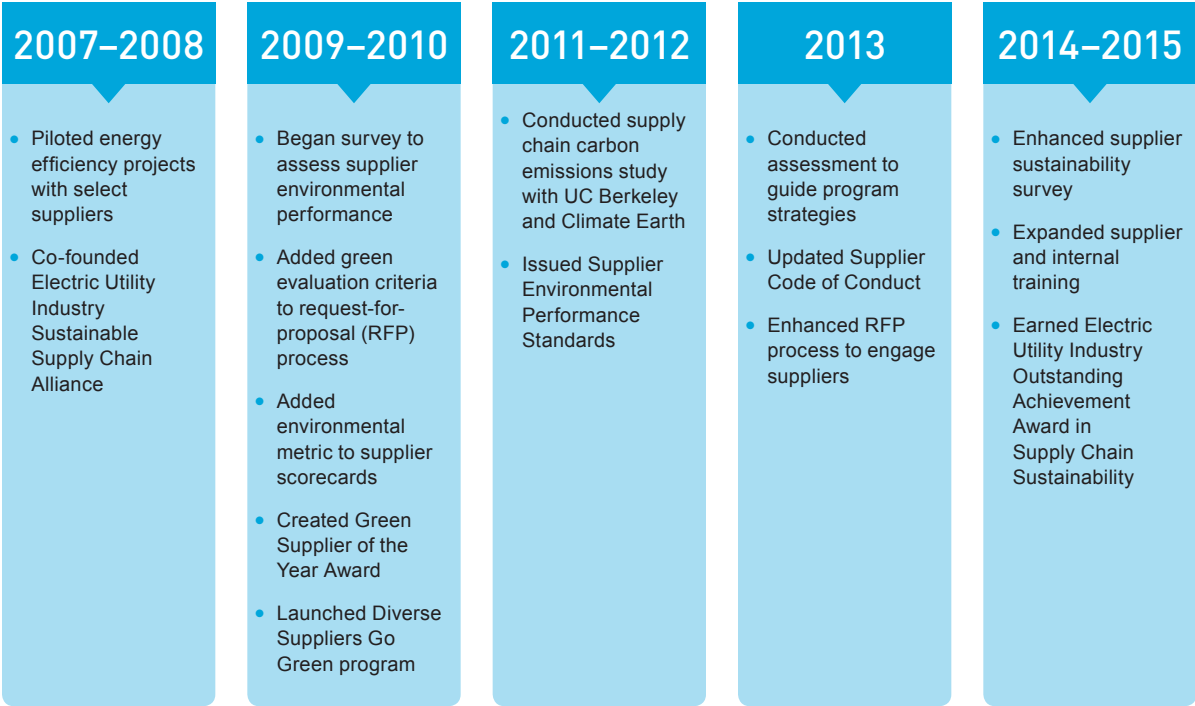
1. Implement an Environmental Management System and track greenhouse gas emissions (Scope 1 and 2), energy use, water use, waste and compliance with environmental requirements.
2. Set voluntary reduction goals in three of the following areas: greenhouse gas emissions (Scope 1 and 2), energy, water and waste.
3. Publicly report their performance against these goals.

We conduct annual evaluations of each top-tier supplier on key performance indicators, including safety, product quality and operations, diversity and environmental performance. We work with suppliers to drive continuous

improvement and provide training to all suppliers on PG&E’s expectations and systems for improving sustainability management. And we provide one-on-one coaching and mentoring to suppliers that can benefit from support.

Advancing Supplier Sustainability Performance

Since 2007, PG&E has been working to advance sustainability within our supplier network.



Reducing Our Environmental Footprint through Product Strategies

PG&E works to identify product choices and procurement strategies that measurably improve our environmental profile. We use the “reduce-reuse-recycle” framework to guide our strategies and plans:

- **Reduce** resource consumption through our product choices. Where there is no feasible option to reduce consumption, 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.

Driving excellence in our remediation projects

Working cooperatively with the California Department of Toxic Substances Control, PG&E led the development of a guidance document to improve how PG&E and its contractors—and others—can manage the sustainability aspects of environmental remediation projects. Cumulative results achieved by PG&E and its contractors since 2010 include:

- Greenhouse gas reductions: 68,000 metric tons
- Energy savings from use of renewable energy: 54,000 kWh
- Offsite waste reduction: 130,000 tons recycled
- Reductions in liquid investigation-derived waste: 23 million gallons
- Reductions in soil investigation-derived waste: 148,000 tons

Partnering with Industry Peers

PG&E continues to partner with industry peers through the Electric Utility Industry Sustainable Supply Chain Alliance, a consortium that PG&E cofounded in 2008 to advance sustainable business practices among suppliers. The Alliance provides a forum to benchmark performance and share best practices in areas spanning from fleet operations to equipment end-of-life recycling.

In 2015, PG&E won the group's Outstanding Achievement Award for our commitment to a sustainable supply chain and active engagement in and support of the Alliance. This was the first award for supply chain sustainability among our industry at the national level.

2015 Milestones

In 2015, we continued to expand the scope of our efforts to engage more suppliers and strengthen our internal partnerships. We completed several key initiatives, including:

- **Automated our supplier sustainability scorecard.** Working with industry peers, PG&E helped lead the development of automated supplier sustainability scorecards, making it easier to integrate sustainability into supplier performance reviews.
- **Deepened our focus on supporting suppliers' ability to grow their businesses.** We piloted an online resource with energy efficiency best practices as a way to deliver technical assistance to suppliers. We also launched a similar project for sustainable construction best practices.
- **Recognized supply chain sustainability at employee awards event.** At PG&E's annual Supply Chain Responsibility Achievement Awards, we recognized outstanding performance by individuals and teams in supply chain sustainability.
- **Launched the first sustainable supplier matchmaking event** at the Sustainable Procurement Leadership Council's national conference.

Recognizing innovation

PG&E's Responsible Supplier of the Year Award recognizes suppliers that demonstrate excellence across a broad spectrum of environmental and supplier diversity factors. Altec, which has been a key partner for PG&E in fleet innovation and a leader in supply chain responsibility, received the award in 2015. Altec's plug-in battery-powered system for trouble trucks has saved approximately:

- 500,000 gallons of diesel fuel
- 5,000 metric tons of carbon dioxide
- \$2 million through reduced fuel costs

Measuring Progress

PG&E annually rates supplier environmental performance against our Environmental Performance Standards and identifies areas for improvement by evaluating supplier responses to a survey conducted by the Electric Utility Industry Sustainable Supply Chain Alliance (Alliance). In 2015, PG&E achieved a 100 percent response rate from surveyed suppliers for the fourth consecutive year.

PG&E's 2015 target was to have at least 65 percent of top-tier suppliers achieve a score of three or higher on a five-point scale. Our results exceeded that goal, with 74 percent of suppliers meeting the standard. In light of those gains, PG&E set a goal of 70 percent for 2016.

The following chart shows the progress in reported performance among top-tier suppliers between 2011 and 2015 against our Supplier Environmental Performance Standard.

Performance Against PG&E's Supplier Environmental Performance Standard

PERCENTAGE OF PG&E SUPPLIERS TRACKING IMPACTS			PERCENTAGE OF PG&E SUPPLIERS WITH REDUCTION GOALS		
	2011	2015		2011	2015
Greenhouse gases	32%	78%	Greenhouse gases	29%	64%
Energy	52%	83%	Energy	50%	64%
Water	40%	69%	Water	36%	55%
Waste	45%	72%	Waste	44%	57%
Compliance	44%	81%			

Additionally, PG&E's suppliers that are Alliance members have demonstrated leadership among Alliance suppliers in tracking environmental impacts and setting voluntary reduction goals.

Supplier Engagement in Environmental Management Compared to Alliance Suppliers

PERCENTAGE OF SUPPLIERS TRACKING IMPACTS			PERCENTAGE OF SUPPLIERS WITH IMPROVEMENT PLANS		
	Alliance Suppliers	PG&E		Alliance Suppliers	PG&E
Greenhouse gases	60%	78%	Greenhouse gases	49%	64%
Energy	62%	83%	Energy	47%	64%
Water	49%	69%	Water	39%	55%
Waste	51%	72%	Waste	41%	57%
Compliance	56%	81%			

Looking Ahead

We will continue to work with our suppliers, internal partners and industry peers to identify actionable opportunities to improve the environmental sustainability of our supply chain, accelerate adoption of best practices and achieve mutually beneficial sustainability goals. In the near term, our continuous improvement efforts will focus on expanding the engagement and training of employers and suppliers and creating online, sector-specific best-practice resources that will improve capacity building and make performance measurement more meaningful.



Historic Impacts

PG&E's environmental commitment extends to our environmental remediation program, which addresses contamination resulting from the historic operations of PG&E and its predecessor companies dating as far back as the mid-to late-1800s. PG&E's overarching goal is to clean up historic impacts by using leading-edge technical approaches and best practices for engaging local stakeholders and suppliers.

Our Approach

PG&E's commitment to environmental stewardship, safety and customer service is reflected in our work. Our sustainable remediation practices and technologies focus on minimizing impacts to the environment and community to the greatest extent possible. We have implemented our guidance for sustainable remediation, prepared and piloted with the California Department of Toxic Substances Control (DTSC).

Stakeholder engagement is an important component of these efforts. We regularly communicate with local businesses, community leaders and residents to promote awareness, solicit feedback and develop strategies to minimize disruptions during the cleanup process. In addition, we partner on initiatives that serve the community, including local hiring and sourcing of goods and services to support the local economy.

We also share best practices and benchmark our efforts against other utilities and industries, including through the MGP Consortium, a peer group of environmental remediation experts from gas utility companies across the nation.

2015 Milestones

PG&E's Natural Gas Compressor Stations

PG&E's natural gas system includes eight compressor stations, which receive and move natural gas throughout our gas infrastructure. During the 1950s and 1960s, long before the environmental standards to which we adhere today, PG&E 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 working diligently under the oversight of state and federal agencies and in coordination with local Native American tribal governments to address these legacy impacts.



Ongoing community engagement

As part of our stakeholder engagement efforts for the Topock project, PG&E staff was on hand at the second annual Earth Day event with the Chemehuevi Indian Tribe. The event brought people together for a day of learning and community building.

At the Topock Compressor Station, we conducted soil investigation work on and around the compressor station property after years of planning and review with regulators and tribes. The information gathered will be used to determine what soil cleanup work may be needed.

We also submitted final plans for a long-term groundwater cleanup plan at the Topock site. The final remedy is expected to be approved by DTSC and the U.S. Department of the Interior in early 2017. While the long-term groundwater remedy is being finalized, we continued operations of interim groundwater measures, which operate around the clock to ensure that the Colorado River is protected from impacts. Built in 2005, the system has successfully controlled groundwater contamination, treating more than 660 million gallons of groundwater and removing more than 8,000 pounds of chromium.

PG&E also remains committed to protecting public health and safety while remediating the groundwater at the Hinkley Compressor Station. Through 2015, we estimate that at least 50 percent of chromium groundwater impacts have been removed. A comparative analysis of treatment to date shows that more mass has been removed than remains to be treated. Ongoing testing of the groundwater confirms that the water quality in domestic wells tested within the program boundaries meets the drinking water standard for hexavalent chromium approved by the California Department of Public Health in 2014.

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.



Increased agricultural opportunities in Hinkley

We have expanded agricultural treatment options to treat hexavalent chromium impacts, working with local farmers. In 2015, PG&E added 66 acres to the Hinkley agricultural treatment program.

Manufactured Gas Plant Sites

In the mid-1800s to the mid-1900s, before natural gas was available as an energy source, thousands of Manufactured Gas Plant (MGP) sites were located across the country, using coal and oil to produce gas for lighting, heating and cooking. With the arrival of natural gas in the 1930s, most of the MGP facilities were closed and the properties put to other uses. We continue to make progress with remediation at 41 MGPs owned or operated by PG&E or its predecessor companies. The following example reflects how the work is being done in a manner that respects the local community:

- **Partnered with local community in San Rafael.** For our cleanup of an MGP site in San Rafael, PG&E worked with the local nonprofit Downtown Streets Team to hire and train two homeless community members, helping them get back on their feet and regain housing. Now that the project is in active remediation, PG&E contracts with small businesses and spends locally whenever possible. These efforts will continue through early 2017, when remediation is expected to be complete.



As part of PG&E's active remediation project in San Rafael, workers conduct cleanup activities within a fully enclosed tent to control dust and odor.

Additional Environmental Remediation Projects

PG&E's commitment to community partnerships and sustainable principles, practices and technologies was evident at other remediation projects in 2015, including:

- **Neared completion of the cleanup at Hunters Point Power Plant.** The cleanup of the former Hunters Point Power Plant (which includes both soil and groundwater) is 95 percent complete. PG&E is working with the City of San Francisco and other key stakeholders on a plan to return the property to productive reuse. NOW Hunters Point, a project supported by PG&E, hosted a second year of educational and interactive activities in a restored area of the property to test future site uses and serve the community.
- **Leveraged nature to clean up Shell Pond.** Now owned by PG&E, this site in Bay Point is home to a 73-acre former wastewater treatment pond built and operated by Shell Oil. In June 2015, PG&E completed the removal and off-site disposal of 5,000 tons of waste. The waste stockpile area was then graded and planted with native grasses to match the surrounding landscape. Through partnerships with local workforce development agencies, PG&E hired three people who live locally to work on the project and also hired a local subcontractor to conduct portions of the work.



Neighborhood resident points to possible future uses of the 31-acre property, formerly home of the Hunters Point Power Plant.



Demonstrating PG&E's commitment to the community

As PG&E continues cleanup efforts at the Shell Pond site, we maintain our partnerships with local schools and nonprofit organizations. PG&E sponsors an annual educational event where local middle and high school students learn how wetlands help improve water quality naturally.

Measuring Progress

Sustainable Remediation

In 2015, we tracked the benefits of sustainable practices gathered from more than 85 remediation sites, which included:

- Using heavy construction and remediation equipment meeting Tier 3 and Tier 4 federal emission standards, reflecting the highest standards in the industry
- Using construction and remediation equipment augmented to further minimize emissions
- Using alternative fuels and renewable sources of energy for equipment and vehicles
- Maximizing recycling, on-site reuse of materials and reductions in liquid and soil wastes generated during remediation

Through these efforts, PG&E reduced cumulative greenhouse gas emissions by more than 8,500 metric tons, reduced liquid wastes by an estimated 5.5 million gallons and added more than \$8.5 million to the local economies near our project sites. The latter was achieved through a concentrated effort on identifying qualified local vendors.

Looking Ahead

PG&E has taken responsibility for historic environmental impacts and continues to work closely with regulators, local residents and others as we make progress on our cleanup plans. For example, following the successful implementation of a tent enclosure at the San Rafael MGP site to minimize impacts to the community, PG&E is evaluating the use of a similar approach at another site. PG&E is also implementing contractor safety oversight standards for its suppliers.

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 versions G4 and 3.1, including the Electric Utility Sector Supplement. While we are working toward meeting the GRI reporting protocols, for several indicators below we currently only partially meet the recommended standard.

General Standard Disclosures

G4 Indicator	G3.1 Indicator	Description	2016 Report Location
Strategy and Analysis			
G4-1	1.1	Statement from the most senior decision-maker	Message from the Chairman and CEO
G4-2	1.2	Description of key impacts, risks, and opportunities	Materiality Key Sustainability Indicators
Organizational Profile			
G4-3	2.1	Name of the organization	Home Page
G4-4	2.2	Primary brands, products, and/or services	PG&E Overview
G4-5	2.4	Location of organization's headquarters	PG&E Overview
G4-6	2.5	Countries in which the company has operations	PG&E Overview
G4-7	2.6	Nature of ownership and legal form	PG&E Overview
G4-8	2.7	Markets served	PG&E Overview
G4-9	2.8	Scale of the reporting organization	PG&E Overview PG&E Corporation and Pacific Gas and Electric Company 2015 Annual Report (PDF)
G4-10	LA1	Gender breakdown of employees	Diversity & Inclusion
G4-11	LA4	Percentage of employees covered by collective bargaining agreements	Employee Engagement
G4-13	2.9	Significant changes during reporting period of organization's size, structure, ownership or supply chain	No significant changes
—	2.10	Awards received in the reporting period	Recognition
G4-EU1	EU1	Installed capacity (MW)	PG&E Overview
G4-EU2	EU2	Net energy output (GWh)	PG&E Overview
G4-EU3	EU3	Number of residential, industrial, institutional, and commercial customer accounts	PG&E Overview
G4-EU4	EU4	Length of transmission and distribution lines	PG&E Overview
G4-EU5	EU5	Allocation of CO ₂ -e emissions allowances	PG&E Corporation's Climate Change 2015 Information Request response, pg. 76-77
Commitments to External Initiatives			
G4-14	4.11	Explanation of whether and how the precautionary approach or principle is addressed by the organization	Risk Management Ethics and Compliance
G4-15	4.12	Externally developed economic, environmental, and social charters	Engaging Stakeholders
G4-16	4.13	Memberships in associations	Public Policy Engagement Climate Change

Identified Material Aspects and Boundaries			
G4-17	2.3	Operational structure of the organization	PG&E Overview
G4-18	3.5	Process for defining report content	Materiality
G4-19	—	Material aspects identified	Materiality
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	3.10	Explanation of the effect of any re-statements of information provided in earlier reports	No significant re-statements of information
G4-23	3.11	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
	3.6	Boundary for the report	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.
	3.7	Specific limitations on the scope or boundary of the report	No significant limitations
	3.8	Basis for reporting on joint ventures, subsidiaries, leased facilities, outsourced operations, and other entities	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.
	3.9	Data measurement techniques and the bases of calculations	Data measurement and bases of calculations are discussed throughout the report.
Stakeholder Engagement			
G4-24	4.14	Stakeholder groups engaged by the organization	Engaging Stakeholders
G4-25	4.15	Identification and selection of stakeholders	Engaging Stakeholders
G4-26	4.16	Approaches to stakeholder engagement	Engaging Stakeholders Our Approach Materiality
G4-27	4.17	Key topics and concerns raised through stakeholder engagement	Engaging Stakeholders Our Approach Materiality
Report Profile			
G4-28	3.1	Reporting period	Home Page; 2015-2016
G4-29	3.2	Date of most recent previous report	October 2015
G4-30	3.3	Reporting cycle	Our Approach; Annual
G4-31	3.4	Contact point for questions regarding the report	Feedback
G4-32	3.12	GRI index	GRI Index This report contains Standard Disclosures from the GRI Sustainability Reporting Guidelines.
G4-33	3.13	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	4.1	Governance structure of the organization, including committees overseeing sustainability	Corporate Governance Our Approach
G4-35	—	Process for delegating sustainability authority from board to executives	Our Approach
G4-36	—	Executive-level position over sustainability efforts	Our Approach
G4-37	4.4	Stakeholder consultation process on sustainability topics	Engaging Stakeholders
G4-38	4.1	Composition of the highest governance body and committees	2016 PG&E Corporation and Pacific Gas and Electric Company Joint Proxy Statement, p. 24
G4-39	4.2	Indicate whether the Chair of the highest governance body is an executive officer	2016 PG&E Corporation and Pacific Gas and Electric Company Joint Proxy Statement, p. 22
G4-40	4.7	Process for determining the composition, qualifications, and expertise of the members of the highest governance body.	2016 PG&E Corporation and Pacific Gas and Electric Company Joint Proxy Statement, p. 25–26
G4-41	4.6	Processes for the highest governance body to ensure conflicts of interest are avoided	2016 PG&E Corporation and Pacific Gas and Electric Company Joint Proxy Statement, p. 22
G4-42	—	Roles in updating company sustainability statements and goals	Our Approach
G4-44	4.10	Processes for evaluating the highest governance body's own performance	PG&E Corporate Governance Guidelines
G4-46	4.9	Board oversight of sustainability risk management	Our Approach
G4-47	4.9	Frequency of the highest governance body's review of sustainability issues	Our Approach
G4-48	—	Highest committee or position that formally reviews and approves the organization's sustainability report	This report has been approved by PG&E's Chairman, CEO and President, as well as the company's officers.
G4-51	4.5	Linkage between compensation and the organization's performance	Our Approach
G4-52	—	Process for determining remuneration	2016 PG&E Corporation and Pacific Gas and Electric Company Joint Proxy Statement, p. 40–57
G4-53	4.4	How stakeholders' views are sought and taken into account regarding remuneration	Corporate Governance
G4-56	—	Corporate mission and values, codes of conduct and principles	Our Approach Risk Management Corporate Governance Ethics and Compliance
G4-57	—	Mechanisms for seeking advice on ethical and lawful behavior	PG&E Compliance and Ethics
G4-58	—	Mechanisms for reporting concerns about unethical or unlawful behavior	PG&E Employee Code of Conduct—How to Raise Concerns

Specific Standard Disclosures

Material Aspect	G4 Indicator	G3.1 Indicator	Description	2016 Report Location
Economic				
Economic Performance	Disclosure of Management Approach			PG&E Corporation and Pacific Gas and Electric Company 2015 Annual Report
	G4-EC1	EC1	Direct economic value generated and distributed	PG&E Overview
	G4-EC2	EC2	Financial implications and other risks and opportunities for the organization's activities due to climate change	Climate Change
	G4-EC3	EC3	Coverage of the organization's defined benefit plan obligations	PG&E Corporation and Pacific Gas and Electric Company 2015 Annual Report, p. 101–102
Indirect Economic Impacts	Disclosure of Management Approach			Our Approach Energy Affordability Community Investments
	G4-EC7	EC8	Development and impact of infrastructure investments and services provided primarily for public benefit	Community Investments
	G4-EC8	EC9	Understanding and describing significant indirect economic impacts, including the extent of impacts	Community Investments Nuclear Operations
Availability and Reliability	Disclosure of Management Approach (G3.1 EU6)			Clean Energy
	G4-EU10	EU10	Planned capacity against projected electricity demand over the long term	Clean Energy
Demand-Side Management	Disclosure of Management Approach (G3.1 EU7)			Customer Energy Efficiency Demand Response
Research and Development	Disclosure of Management Approach (G3.1 EU8)			Electric Operations
Plant Decommissioning	Disclosure of Management Approach (G3.1 EU9)			Nuclear Operations
Environmental				
Energy	Disclosure of Management Approach			Clean Energy Customer Energy Efficiency Buildings and Facilities
	G4-EN3	EN3	Energy consumption within the organization	PG&E Overview Clean Energy Buildings and Facilities
	G4-EN4	EN3	Energy consumption outside of the organization	PG&E Overview Clean Energy
	G4-EN6	EN5	Energy saved due to conservation and efficiency improvements	Customer Energy Efficiency Buildings and Facilities
	G4-EN7	EN6	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 Solar and Distributed Generation Clean Energy Renewable Energy

Water	Disclosure of Management Approach			Water and Drought Response
	G4-EN8	EN8	Total water withdrawal by source	Water and Drought Response
	G4-EN9	EN9	Water sources significantly affected by withdrawal of water	Water and Drought Response Hydroelectric Operations Natural Resource Stewardship
Biodiversity	Disclosure of Management Approach			Natural Resource Stewardship
	G4-EN12	EN12	Description of significant impacts of activities, products, and services on biodiversity	Natural Resource Stewardship
	G4-EN13	EN13	Habitats protected or restored	Natural Resource Stewardship
Emissions	Disclosure of Management Approach			Climate Change Buildings and Facilities
	G4-EN15	EN16	Direct greenhouse gas emissions (Scope 1)	Climate Change
	G4-EN16	EN16	Indirect greenhouse gas emissions (Scope 2)	Climate Change
	G4-EN17	EN17	Other relevant indirect greenhouse gas emissions (Scope 3)	Climate Change
	G4-EN18	EN19	Greenhouse gas emissions intensity	Climate Change
	G4-EN19	EN18	Reduction of greenhouse gas emissions	Climate Change
	G4-EN21	EN20	NO _x , SO _x , and other significant air emissions by type and weight	Buildings and Facilities
Effluents and Waste	Disclosure of Management Approach			Compliance Buildings and Facilities
	G4-EN22	EN21	Total water discharge by quality and destination	Water and Drought Response
	G4-EN23	EN22	Total weight of waste by type and disposal method	Buildings and Facilities
	G4-EN24	EN23	Total number and volume of significant spills	Compliance
	G4-EN25	EN24	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			Clean Energy
	G4-EN27	EN26	Initiatives to mitigate environmental impacts of products and services, and extent of impact mitigation	Clean Energy Renewable Energy Hydroelectric Operations Conventional Sources Nuclear Operations Customer Energy Efficiency Demand Response Solar and Distributed Generation Natural Resource Stewardship
Compliance	Disclosure of Management Approach			Compliance
	G4-EN29	EN28	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-EN30	EN29	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			Supplier Sustainability
	G4-EN32	-	Percentage of new suppliers screened using environmental criteria	Supplier Sustainability
Social				
Employment	Disclosure of Management Approach (G3.1 EU14 and EU16)			Employees Career Pathways Workplace Safety
	G4-LA1	LA2	Total number and rate of employee turnover by age group, gender and region	Career Pathways
	G4-LA2	LA3	Benefits provided to full-time employees that are not provided to temporary or part-time employees	Health and Wellness Our Benefits
	G4-EU15	EU15	Percentage of employees eligible to retire in the next five years	Career Pathways
Labor/ Management Relations	Disclosure of Management Approach			Employee Engagement
Occupational Health and Safety	Disclosure of Management Approach			Building a Safety-First Culture Workplace Safety
	G4-LA6	LA7	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	LA11	Programs for skills management and lifelong learning	Career Pathways
Diversity and Equal Opportunity	Disclosure of Management Approach			Diversity and Inclusion
	G4-LA12	LA13	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 2016 PG&E Corporation and Pacific Gas and Electric Company Joint Proxy Statement, p. 12–19
Local Communities	Disclosure of Management Approach (G3.1 EU19)			Engaging Stakeholders
Anti-Corruption	Disclosure of Management Approach			Ethics and Compliance
	G4-SO4	SO3	Communication and training on anti-corruption policies and procedures	Ethics and Compliance
	G4-SO5	SO4	Confirmed incidents of corruption and actions taken	Ethics and Compliance
Public Policy	Disclosure of Management Approach			Public Policy Engagement
	G4-SO6	SO6	Total value of financial and in-kind contributions to political parties, politicians, and related institutions	Public Policy Engagement
Compliance	Disclosure of Management Approach			Ethics and Compliance
	G4-SO8	SO8	Monetary value of significant fines for noncompliance with laws and regulations	PG&E Overview
Disaster/ Emergency Planning and Response	Disclosure of Management Approach (G3.1 EU21)			Public Safety

Customer Health and Safety	Disclosure of Management Approach			Public Safety
Product and Service Labeling	Disclosure of Management Approach			Customers and Communities
	G4-PR5	PR5	Results of surveys measuring customer satisfaction	Engaging Customers
Customer Privacy	Disclosure of Management Approach			Public Safety
Access	Disclosure of Management Approach (G3.1 EU23)			Energy Affordability
	G4-EU28	EU28	Power outage frequency	Electric Operations
	G4-EU29	EU29	Average power outage duration	Electric Operations
	G4-EU30	EU30	Average plant availability factor by energy source	Conventional Sources Nuclear Operations
Provision of Information	Disclosure of Management Approach (G3.1 EU24)			Public Safety Engaging Customers

Forward-Looking Statements

This Corporate Responsibility and Sustainability Report, including the Messages from the Chairman and Chief Sustainability Officer, contain forward-looking statements regarding our strategic plans that have been shaped by an assessment of risks and opportunities that management have determined are material to our long-term corporate sustainability.

These plans, the assessment, and the underlying assumptions and forecasts 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, including our Annual Report on Form 10-K for the year ended December 31, 2015 (the "2015 Annual Report") and the Quarterly Reports on Form 10-Q for the quarters ended March 31 and June 30.