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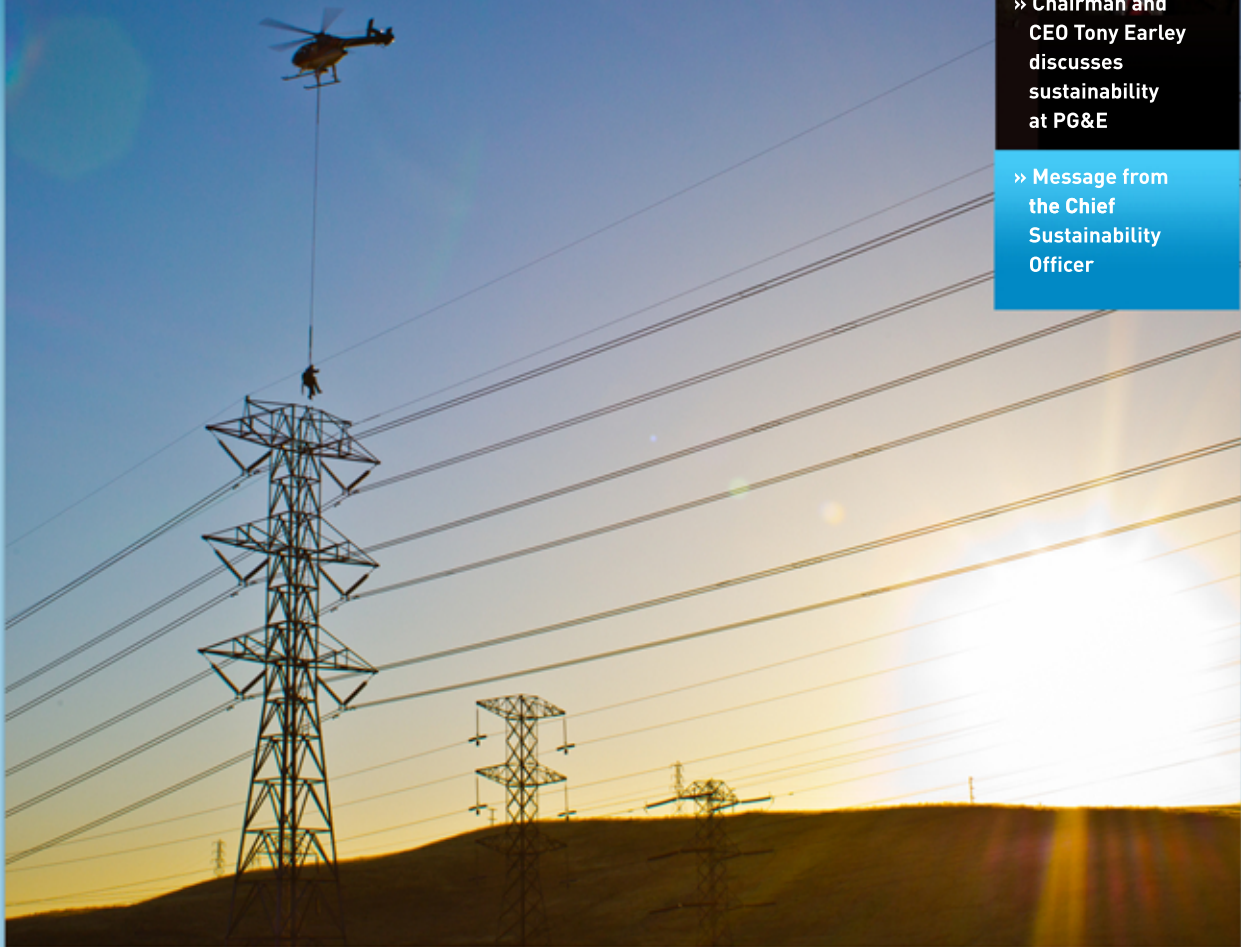
2011 Corporate Responsibility and Sustainability Report

PG&E's Sustainability Journey: Building a Stronger Foundation for the Future



» Chairman and
CEO Tony Earley
discusses
sustainability
at PG&E

» Message from
the Chief
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Officer



**Improving the Safety
of Our Gas Operations**



**Strengthening
Collaboration with
First Responders**



**Building Career
Pathways**



**Driving Local
Economic Benefits**



**Protecting Condors
in Big Sur**

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Message from the Chief Sustainability Officer

A Note to Our Stakeholders:

For more than 10 years, I've been fortunate to actively participate in PG&E's sustainability journey, as we have expanded our definition of sustainability beyond acting as responsible environmental stewards. Over the past decade, we have increasingly adopted a broader lens, one that encompasses priorities such as strengthening the safety and bolstering the economic vitality of the communities where PG&E does business and where our employees live and work.

As a company that stretches across 70,000 square miles, employs more than 20,000 people and provides essential services to 15 million Californians, sustainability is an integral part of our business. A focus on sustainability helps create a company that's ready to stand the test of time—one where safety is at the center of everything we do, employees are engaged, taking care of the environment is prioritized and our business and all of our stakeholders can thrive.

No one knew that better than PG&E's first Chief Sustainability Officer, Steve Kline, who retired earlier this year. For me, following Steve in this role is both a privilege and an honor. For PG&E, building on the positive momentum he and countless employees have built on sustainability will no doubt be a challenge, as will be continuing to address the formidable challenges we face as a company.

After the tragic accident in San Bruno two years ago, PG&E reassessed how we do business, how we operate and maintain our gas and electric systems, and how we serve our customers. We are working every day to incorporate the lessons we've learned from that tragedy across our business so that an accident like that never happens again.

Under the leadership of Tony Earley, PG&E Corporation's new Chairman, CEO and President, we have embraced a back-to-basics strategy that's focused on delivering safe, reliable and affordable gas and electric service and building a better PG&E for the long-term. The changes we've made as a result of this strategy have been sweeping, perhaps most visibly in the decision to separate our gas and electric units, our renewed commitment to public and employee safety, and the investments we're already making—and those we've proposed—to upgrade our energy infrastructure.

As we get back to the basics, we will continue to integrate and drive a sustainability mindset across our business. This year's report includes many examples of the progress we're making, including our pioneering partnership with Altec Industries and their new green fleet manufacturing facility in Dixon, which will build low-emission bucket trucks for PG&E and add about 100 jobs to the local community. Through our PowerPathway™ and Pre-Apprentice Line Worker programs, we are helping to build the workforce of tomorrow by hiring and training qualified employees, including those who have served our country in the armed forces. And our Solar Habitat Program continues to help customers in underserved communities to go solar and save money on their utility bills.

Earning a spot on last year's Dow Jones Sustainability North America Index, 100 Best Corporate Citizens List and Carbon Disclosure Leadership Index reflects that we are moving in the right direction. But we know that we have more work to do.

As we move ahead, we continue to benefit from the active engagement and guidance of our many stakeholders—maintaining the open dialogue that Steve pledged in last year's report. We are especially grateful for the ongoing counsel of the nonprofit Ceres, which again facilitated a conversation with a diverse group of our stakeholders in preparation for this report. The input of these customers, suppliers, investors, environmental and community groups, and workforce development experts continues to inform our reporting efforts and our path forward.

We look to the future well aware of the challenges that we and our customers face: a struggling job market, the ongoing transition to a low-carbon economy and the continued integration of a wide array of emerging technologies, among others. But by thinking long-term—by thinking sustainably—and working together, we can meet the challenges of tomorrow and build a brighter future for our state and our customers.

That journey continues with the publication of our 2011 Corporate Responsibility and Sustainability Report. We invite your feedback on the progress we are making and look forward to your continued engagement in the months and years to come.

Sincerely,

Ezra Garrett

Vice President and Chief Sustainability Officer

About the Report

PG&E Corporation and its operating subsidiary, Pacific Gas and Electric Company, (together referred to in this report as PG&E unless noted otherwise) publish this annual report to share our vision and goals for the long term sustainability of PG&E as a provider of safe, reliable and affordable electricity and natural gas to our customers; as a responsible steward for the environment; as a major employer that promotes diversity and encourages employees to always “do the right thing;” as an important partner in the economic vitality of California; as a supporter of the many local communities we serve; and as a corporation that maintains high corporate governance standards and practices.



This report explains the progress we are making, and the challenges that remain, as we focus on getting back to basics in order to elevate our performance and fulfill our commitments to customers and other stakeholders.

Defining Key Issues

In developing and writing this report, PG&E engaged with the non-profit organization, Ceres, and an independent group of stakeholders representing a range of interests that have expertise in environmental, social, labor, governance and other issues. Included in this group were leaders from different stakeholder constituencies, such as customers, suppliers, investors, environmental and community groups, and workforce development experts.

In reviewing plans for this report, this group provided feedback on our key sustainability issues, as well as our performance addressing these issues; they also provided input on how we should report on these issues.

Through this review process, the group provided extensive feedback to PG&E, including encouraging discussion of the major challenges of the past year and the steps we are taking to strengthen our business operations and restore the trust and confidence of our customers and other stakeholders. The extensive feedback helped identify our key issues and informed the preparation of the final version of this report.

In addition, PG&E engaged a wide network of employees at different levels to identify and provide substantive input and feedback on the key issues. Our thinking was informed by numerous other sources, including the key accomplishments and challenges addressed at an annual meeting of PG&E's leadership

team, issues identified in the company's Annual Report to Shareholders and dialogue within the Public Policy Committee of the PG&E Corporation Board of Directors.

How to Provide Feedback and Learn More

Stakeholders can [contact us](#) to solicit additional information and offer comments and suggestions on this and future reports.

Stakeholders can also visit www.pge.com for tips to improve the energy efficiency of their homes and businesses and reduce their carbon footprint.

Cautionary Language Regarding Forward-Looking Statements

This Corporate Responsibility and Sustainability Report and the Messages from the Chairman and Chief Sustainability Officer contain forward-looking statements that are based on current expectations and various assumptions that management believes are reasonable.

These statements and assumptions 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, 2011 and the information incorporated in such report (the "2011 Annual Report").

About the Business




PG&E's customer promise reflects the heart of our basic business: delivering safe, reliable and affordable gas and electric operations to 15 million Californians. Every day, we pursue this promise with an eye toward rebuilding customer trust and building a better PG&E for the long term. At its core, this means moving forward in a way that creates a stable, durable and long-lasting company—one that is able to support the sustainability of our customers, our employees and the environment.

A sustainable company is one that follows through on its promises today while planning for the future. A renewed focus on benchmarking industry best practices is charting our course to make steady and visible progress toward our long-term goal of operating the safest utility in the country. We are listening to our customers and introducing new tools and technologies to better serve them. And we are forging stronger relationships with our stakeholders to sustain the success and economic vitality of towns and neighborhoods across our service area.

Key Sustainability Indicators

● = meets or exceeds target ● = below target ● = substantially below target

2011 Target	Progress	2011 Result	2012 Target
Natural Gas Operations¹			
<i>Pipeline Safety Enhancement Plan</i>			
Strength Testing: 152 miles	●	163 miles	185 miles
Pipeline Replacement: 0.3 miles	●	0.3 miles	39 miles
Valve Automation: 29 valves	●	13 valves ¹	46 valves
Pipeline Retrofits: ² N/A	N/A	N/A	78 miles
Validation of Pipeline Maximum Allowable Operating Pressure: 1,800 miles	●	1,826 miles	3,400 miles
Electric Operations			
System Average Interruption Frequency Index (average number of outages per customer): 1.052 interruptions per customer	●	0.967 interruptions per customer	1.008 interruptions per customer ³
System Average Interruption Duration Index (average duration of outages per customer): 117.7 minutes	●	109.7 minutes	133.1 minutes ³
Customer Average Interruption Duration Index (average restoration time per outage): 111.9 minutes	●	113.4 minutes	132.1 minutes ³
Compliance and Ethics Training			

99.8% of employees complete annual compliance and ethics training ⁴		99.9%	99.8%
Code of Conduct Training			
99.8% of management employees complete annual code of conduct training ^{4, 5}		99.7%	99.8%
Billing Accuracy ⁶			
Gas and electric meter billing accuracy: 99.70%		99.74%	99.74%

¹ Although PG&E ran into construction challenges in 2011, we have implemented process improvements to strengthen our performance moving forward. This activity is part of a multi-year program and PG&E remains on track to meet our longer term goal for valve automation.

² Refers to pipeline reconfiguration to accommodate insertion of inspection tools or “smart pigs.”

³ Beginning in 2012, PG&E's targets will include planned outages to provide a more complete view of our electric reliability performance.

⁴ Each year, and for a variety of reasons, a statistically small number of PG&E's approximately 20,000 employees are unable to attend a training session. To earn a Green assessment for this metric, PG&E's result must fall within 1 percent of the target.

⁵ Represents the percentage of management employees who certified that they had read, understood and would comply with the Employee Code of Conduct. To earn a Green assessment for this metric, the result must fall within 1 percent of the target. Union-represented employees received electronic reminders or briefings from supervisors about the code.

⁶ 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).

Company Overview

PG&E Corporation is an energy-based holding company whose core business is Pacific Gas and Electric Company. Based in San Francisco, Pacific Gas and Electric Company, or the Utility, delivers some of the nation's cleanest energy to 15 million people in Northern and Central California. PG&E Corporation had approximately \$49.75 billion in assets as of December 31, 2011, and generated revenues of approximately \$15 billion in 2011.

Throughout this report, when we refer to "PG&E" we are discussing all of PG&E Corporation and its subsidiaries, including Pacific Gas and Electric Company.



Photo: Lewis Stewart

About PG&E

Employee Perspectives



David Schappert, a troubleman, talks about being PG&E's local presence in his neighborhood.

Headquarters Location

San Francisco, California

Service Area

70,000 square miles in Northern and Central California

Service Area Population

15 million people (or about 1 of every 20 Americans)

Electric Distribution Customer Accounts

5.2 million (approximately 4.54 million residential and 0.65 million commercial, industrial and other customer accounts)

Natural Gas Distribution Customer Accounts

4.3 million (approximately 4.1 million residential and 0.2 million commercial and industrial customer accounts)

Employees

19,274 regular employees (as of December 31, 2011)

Approximately 11,950 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), United Service Workers West

System

Approximately 160,000¹ circuit miles of electric transmission and distribution lines and 48,740 miles of natural gas transmission and distribution pipelines; 7,414² MW of generation, including the Diablo Canyon Nuclear Power Plant and one of the largest hydroelectric systems in the country

Examples of Major Customer Segments

Residential, Small Business, Retail, Agriculture, Education, Heavy Industry and Manufacturing, Government, Medical, Distillers, Hospitality, High-Technology, Food Service, Biotechnology, Large and Small Commercial Enterprises

¹ Length of distribution lines in circuit miles by voltage:

4 kilovolts (kV): 2,499

12 kV: 103,693

17 kV: 4,551

21 kV: 30,656

34 kV: 4

44 kV: 12

Length of transmission lines in circuit miles by voltage:

60 kV: 3,855

70 kV: 1,549

115 kV: 6,040

230 kV: 5,414

500 kV: 1,328

Idle: 432

² Net operating capacity on December 31, 2011: Gateway Generating Station: 530 MW of base capacity and 50 MW of enhanced capability; Humboldt Bay Generating Station: 163 MW; Colusa Generating Station: 530 MW of base capacity and 127 MW of enhanced capability; Diablo Canyon: 2,240 MW; Hydroelectric facilities: 3,896 MW; Photovoltaic sites: 52 MW; Fuel cell sites: 3 MW.

Financial Highlights¹

PG&E Corporation

(unaudited, in millions, except share and per share amounts)	2011	2010
Operating Revenues	\$ 14,956	\$ 13,841
Income Available for Common Shareholders		
Earnings from operations ²	1,438	1,331
Items impacting comparability ³	(594)	(232)
Reported Consolidated Income Available for Common Shareholders	844	1,099
Income Per Common Share, Diluted		
Earnings from operations ²	3.58	3.42
Items impacting comparability ³	(1.48)	(0.60)
Reported Consolidated Net Earnings Per Common Share, Diluted	2.10	2.82
Dividends Declared Per Common Share	1.82	1.82
Total Assets at December 31,	\$ 49,750	\$ 46,025
Number of Common Shares Outstanding at December 31,	412,257,082	395,227,205

¹ This information is derived from PG&E Corporation's Consolidated Financial Statements for the year ended December 31, 2011 and includes the accounts of PG&E Corporation, Pacific Gas and Electric Company, and their subsidiaries. PG&E Corporation and Pacific Gas and Electric Company's separate Consolidated Financial Statements appear in their combined Annual Report to Shareholders for the year ended December 31, 2011.

² "Earnings from operations" is not calculated in accordance with the accounting principles generally accepted in the United States of America ("GAAP"). It should not be considered an alternative to income available for common shareholders calculated in accordance with GAAP. Earnings from operations reflects PG&E Corporation's consolidated income available for common shareholders, but excludes items that management believes do not reflect the normal course of operations, in order to provide a measure that allows investors to compare the core underlying financial performance of the business from one period to another.

³ "Items impacting comparability" represent items that management believes do not reflect the normal course of operations. PG&E Corporation's earnings from operations for 2011 exclude \$520 million of costs, after-tax, (\$1.30) per common share, in connection with natural gas matters. These amounts included \$287 million of pipeline-related costs, after-tax, to review records, validate operating pressures, conduct hydrostatic pressure tests, inspect pipelines, and perform other activities associated with safety improvements to the Utility's natural gas pipeline system to comply with orders issued by the California Public Utilities Commission ("CPUC") and recommendations made by the National Safety Transportation Board following the rupture of one of the Utility's natural gas transmission pipelines in San Bruno, California on September 9, 2010 (the "San Bruno accident"). These amounts also included a provision of \$200 million for the minimum amount of reasonably estimable penalties deemed probable of being imposed on the Utility in connection with the CPUC's pending investigations and the Utility's self-reported violations regarding natural gas operating practices. These costs also included an increase of \$92 million, after-tax, in the provision for estimated third-party claims related to the San Bruno accident, reflecting new information regarding the nature of claims filed against the Utility, experience resolving cases, and developments in the litigation and regulatory proceedings. Costs incurred for 2011 were partially offset by insurance recoveries of \$59 million, after-tax. In addition, PG&E Corporation's earnings from operations for 2011 also exclude \$74 million, after-tax, (\$0.18) per common share, for environmental remediation and other estimated liabilities associated with the Utility's natural gas compressor site located near Hinkley, California. PG&E Corporation's earnings from operations for 2010 exclude \$168 million of costs, after-tax, (\$0.43) per common share, relating to the San Bruno accident, which primarily includes a provision for third-party claims. Additionally, during 2010, the Utility spent \$45 million, (\$0.12) per common share, to support a state-wide ballot initiative and recorded a charge of \$19 million, (\$0.05) per common share, triggered by the elimination of the tax deductibility of Medicare Part D federal subsidies.

General Utility Production Statistics

	2009	2010	2011
Total Electricity Generated (GWh net)¹	28,114	32,168	35,353
Fossil-Fuel Plants (GWh net)	3,042	3,681	5,105
Humboldt Bay Power Plant (GWh net) ²	552	384	N/A
Humboldt Bay Generating Station (GWh net) ²	N/A	130	469
Gateway Generating Station (GWh net) ³	2,490	3,099	2,648
Colusa Generating Station (GWh net) ⁴	N/A	68	1,981
Fuel Cells ⁵	N/A	N/A	7
Other plants (GWh net)	25,072	28,488	30,248
Diablo Canyon Power Plant (GWh net)	16,265	18,431	18,566
Hydro Facilities (GWh net) ⁶	8,806	10,053	11,654
"Eligible" Hydro (GWh net) ⁷	1,102	1,144	1,249
Solar Facilities	0.5	4.6	28
Electricity Purchased (GWh)	37,165	40,676	36,762
Other Electric Supplies (GWh) ⁸	14,346	4,640	2,748
Bundled Retail Electricity Sales (GWh)⁹	79,624	77,485	74,864
Total Natural Gas Throughput (million cubic feet or MMcf)¹⁰	844,675	842,343	804,255

¹ One GWh or gigawatt-hour, is one million kilowatt-hours, enough to power one million homes for one hour. PG&E is reporting net energy statistics for consistency with other published reports. Data undergoing final verification.

² The Humboldt Bay Power Plant facilities, two operating fossil fuel-fired plants and two mobile turbines, were retired at the end of September 2010. The new Humboldt Bay Generating Station became operational in September 2010.

³ Gateway Generating Station became operational in January 2009.

⁴ Colusa Generating Station became operational in December 2010.

⁵ The Utility owns and operates three fuel cell sites in the Bay Area that became operational in September 2011 and have a combined capacity of 3 MW.

⁶ Hydroelectric generation can vary year to year due to variability in precipitation.

⁷ Electricity generated by hydroelectric facilities with a capacity under 30 MW is eligible as renewable energy under California's Renewable Portfolio Standard law.

⁸ Other Electric Supplies represents energy purchased by the California Department of Water Resources (DWR) from various energy suppliers for the benefit of the Utility's customers. The DWR remains legally and financially responsible for its power purchase contracts. The Utility acts as a billing and collection agent for the DWR to enable the DWR to pay for its energy purchases.

⁹ Bundled Retail Electricity Sales excludes sales to direct access and community choice customers, and sales to railroads and railways. Electricity Delivered, which totaled 83,684 GWh in 2011, includes these sales, but excludes sales for resale.

¹⁰ Total Natural Gas Throughput excludes other interdepartmental natural gas sales but includes interdepartmental natural gas sales for the purpose of electric generation.

Integrating Sustainability into Our Business

The last year at PG&E has been characterized by change—to our senior leadership, to our operations and culture, and to how we approach the business of powering Northern and Central California. Our 20,000 employees have embraced a back to basics focus on providing safe, reliable and affordable gas and electric service and our ultimate long-term aim of operating the safest utility in the country.



Focusing on the Basics of Our Business

As we make progress on the fundamentals of our business, we continue to be guided by five overarching corporate goals: public and employee safety, delighting customers, engaging employees, rewarding shareholders and environmental leadership. Importantly, while public and employee safety has always been a part of PG&E's core values, it was elevated to one of our corporate goals in recognition that it is our most fundamental responsibility and must be at the core of PG&E's operations and culture.

Taken together, these five goals comprise our integrated approach to sustainability, a fact reflected in the industry leading investments we're making in [customer energy efficiency](#), the [career pathways we're building for the next generation of utility workers](#), the growing portfolio of [renewable energy](#) we're delivering to customers and the [diversity and economic vitality we're bringing to our supply chain](#), among many other areas.

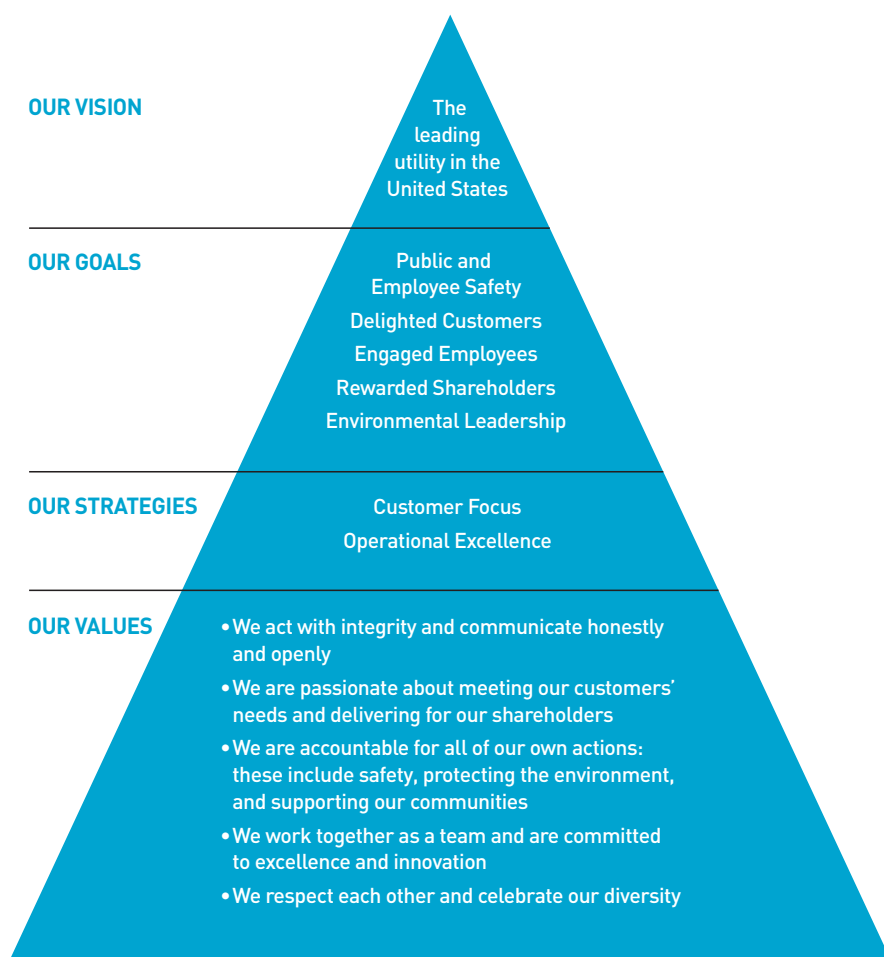
California's regulatory and public policy framework reinforces sustainability at PG&E. Our sustainability commitment is to meet these requirements in a way that minimizes costs for our customers, fosters innovation and new partnerships and looks for opportunities to go beyond what's required.

For example, decoupling, which breaks the link between our energy sales and revenues, enables PG&E to aggressively pursue [customer energy efficiency](#) without the disincentive of a significant financial loss. The [state's "loading order"](#) puts first priority on reducing energy use through energy efficiency and demand-side resources, then renewable generation and, finally, a clean conventional electric supply. [Assembly Bill 32](#), which requires the state to reduce its greenhouse gas emissions, and the [Renewable Portfolio Standard](#), which is expanding renewable supplies for our customers, are other important drivers of sustainability.

Our Vision and Values

PG&E's vision and values reinforce our continued focus on our customers and achieving excellence in our operations. We remain steadfast in our commitment to living our values and embracing the behaviors that will allow us to achieve our goals, strategies and vision.

Our Vision and Values



Our sustainability commitment is also reflected in the very ways we make progress toward these objectives—by engaging and listening to our customers, employees and many other stakeholders; by benchmarking our performance to identify best practices and make improvements to better serve our customers; by leveraging new tools and technologies; and by doing so in an increasingly open and transparent manner.

Managing Sustainability

The Public Policy Committee of PG&E Corporation's Board of Directors has primary oversight of sustainability issues, such as environmental compliance and leadership, workforce development and climate change. Other committees of the PG&E Corporation Board and the full Board itself address other components of PG&E's sustainability portfolio, such as public and employee safety, investments made to build a smarter grid and the pathways to increasing our deliveries of renewable electricity.

Within management, the Chief Sustainability Officer of Pacific Gas and Electric Company is responsible for developing and coordinating PG&E's sustainability initiatives and overseeing PG&E's sustainability reporting and measurement. The Chief Sustainability Officer and his team also spearhead community investment,

employee engagement and community engagement programs for PG&E and provide strategic input on key business challenges and opportunities.

The Chief Sustainability Officer coordinates with other members of senior management who are responsible for functions such as supply chain management, environmental compliance and customer energy solutions.

Measuring Sustainability

PG&E's sustainability strategy is framed by PG&E's five corporate goals. Following the San Bruno accident in 2010, in which a PG&E natural gas pipeline ruptured, we are reexamining our business from top to bottom under new leadership. This includes a thorough review of the specific metrics we are using to determine how we are performing across these various dimensions to align with our enhanced focus on the basics of our business.

We have stated that our long-term goal is to have the safest operations in the country. We have also reaffirmed our strong and continued commitment to our other corporate goals of delighting customers, engaging employees, rewarding shareholders and environmental leadership.

In addition to the Key Sustainability Indicators included in this report, PG&E's Short-Term Incentive Plan (STIP) reinforces PG&E's vision and values by rewarding eligible employees for their contributions toward achieving goals that benefit our customers, shareholders, employees and the environment. Each year, we reexamine our STIP to help ensure we are employing the most effective and accurate means of measuring and reinforcing our performance. In doing so, we aim to sharpen our STIP measures, better align our rewards program with the direction of our business and bring increased accountability to PG&E's overall results.

As shown below, under the 2011 STIP structure, 50 percent of the overall STIP score was based on PG&E's performance against key operational objectives related to safety, reliability, customer satisfaction, employee engagement and environmental leadership. The remaining 50 percent was based on corporate financial performance, as measured by earnings from operations.

The 2011 STIP was as follows:

2011 STIP—Performance Measures

Measure	Relative Weight
Operational Excellence Index	25%
Customer Satisfaction and Brand Health Survey Index	15%
Employee Engagement Premier Survey Results Index	5%
Environmental Leadership Index	5%
Earnings from Operations	50%
Total Weightings	100%

In the 2012 STIP, we are tying safety more closely to compensation than ever before. Safety performance

measures—which have been expanded to encompass not only employee safety but also public safety—now determine 40 percent of management’s annual at-risk performance-based pay. This is now the single largest driver for annual at-risk performance-based pay, with financial performance and customer service each representing 30 percent of the total.

2012 STIP—Performance Measures

Measure	Relative Weight
Safety ¹	40%
Customer Satisfaction ²	30%
Financial ³	30%
Total Weightings	100%

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

² Based on three equally weighted metrics: the overall satisfaction of customers, as measured through a quarterly survey; how quickly gas asset information is entered into the Utility’s gas mapping system after a gas project is completed; and the average duration of electricity outages.

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

For more details on the specific measures and targets for our 2011 and 2012 STIP, as well as our 2011 results, please see page 42 of the [2012 PG&E Corporation and Pacific Gas and Electric Company Joint Proxy Statement](#).

Looking Forward

We recognize that our actions today will define our success in the future. By focusing our efforts on providing safe, reliable and affordable gas and electricity, individually and collectively, we intend to regain our standing in the communities we serve and earn back the trust of our customers and key stakeholders.

As we look for ways to better serve our customers, we will maintain our focus on the broad scope of our environmental efforts. This includes working to [reduce our operational footprint](#), [advance clean technologies](#) and [protect sensitive habitat and wildlife](#), with a foundational focus on meeting both the letter and the spirit of our [compliance obligations](#). As we pursue our aspirational goal of environmental leadership, we also remain committed to priorities such as helping to ensure the [successful implementation of AB 32](#) and [helping our customers better manage their energy usage](#), taking advantage of new and emerging technologies and offering tailored programs and services.

As we continue to integrate sustainability into our business, we are also looking to strengthen the social and economic aspects of our sustainability commitment by increasing our contributions to the [vitality of the communities we serve](#).

For example, the investments we are making in our infrastructure will not only lead to a more sustainable and durable system; they will also help make California stronger and will support efforts to revitalize the state’s economy.

We are also placing an increased emphasis on “going local” by better [serving our customers where they live and work](#) through more integrated, proactive customer outreach and through [local community partnerships](#)—from emergency preparedness efforts to investing in local economic and energy-related workforce development initiatives.

We will continue to expand and improve our sustainability reporting and disclosure and to rely on [active engagement with our stakeholders](#) to guide our efforts because we recognize that these are foundational elements of our sustainability program.

Our Gas Operations

PG&E has reshaped and reinvigorated its gas operations business with a back-to-basics approach focused on providing safe, reliable and affordable customer-centric service. This approach is perhaps most visible in the many immediate and longer-term steps we have taken to ensure the safety and integrity of our gas system.



Changing the Culture: Putting Safety Above All Else

To help drive continuous improvement, PG&E separated its gas and electric businesses and reorganized its gas operations under a new leadership team headed by Nick Stavropoulos, a 30-year gas industry veteran. Under his leadership, the gas organization also clarified roles and responsibilities, provided more effective governance and established an organizational structure that will facilitate process improvements.

In addition, we established a leadership team with extensive industry expertise and expanded our work force, where needed, to implement the organization's enhanced focus on safety and operational excellence. Among other responsibilities, these employees will perform leak surveys and leak repairs, replace pipe, install new infrastructure, perform critical quality assessment and quality control functions, conduct investment planning work, respond to emergencies and handle other functions critical to providing best-in-class natural gas service.

PG&E is taking [numerous steps to turn around our safety performance](#) and create a safety-first culture that makes public safety our top priority. These include:

- Establishing greater centralized control over our gas standards, procedures and systems and creating and/or updating these guidance documents with key input related to public and employee safety, new codes, industry best practice and existing quality processes and employee feedback;
- Empowering employees to report and act on safety concerns and letting employees know that their ideas and opinions are an important part of improving safety, accountability and operational performance;
- Developing training and evaluation programs that support employees throughout their careers, benchmarking training practices and prioritizing training development and delivery; and
- Broadening the scope and resources of a unit dedicated to quality and improvement within our gas

operations organization.

While this work will span several years and involve many organizational, operational and procedural changes, we are working to build a modern gas system that will meet a new set of regulations and set the standard when it comes to pipeline safety. We have also made substantial progress in communicating with customers, working with regulators and coordinating with local government agencies and first responders throughout this process. We are committed to open and transparent communication as we work to improve the safety and integrity of our natural gas system.

Steps Taken to Strengthen the Safety of our Gas System

While moving ahead with the foundational improvements noted above, PG&E has already taken and will continue to take actions that assure public safety remains the highest priority. In 2011, those steps included:

- Reducing pressure on more than 900 miles of gas transmission pipelines to provide a greater margin of safety on our operating pipelines;
- Hydrostatically testing 163 miles of transmission pipeline running through densely populated areas. These tests, where pipe segments are isolated and water is inserted and pressurized for extended periods, are intended to validate the ability of the pipeline to operate safely at its maximum allowable operating pressure (MAOP) and identify any weaknesses or leaks in the system;
- Validating the MAOP on approximately 2,000 miles of transmission pipeline, primarily transmission pipelines running through urban, populated areas known as high consequence areas;
- Gathering, scanning and uploading more than 2.3 million paper documents into electronic files going back more than 50 years;
- Installing five new automated valves, automating six existing valves and upgrading two valves that already had remote control capabilities; and
- Increasing patrols and leak surveys.

In addition, PG&E is also [increasing coordination with local officials and first responders](#) in communities across our service area, sharing crucial information on PG&E's systems and bringing an added degree of collaboration and emergency preparedness for both PG&E and these stakeholders.

PG&E's Pipeline Safety Enhancement Plan

In June 2011, the CPUC directed PG&E and other California gas utilities to submit a plan for replacing or pressure testing all natural gas transmission pipelines that had not already been pressure tested. PG&E responded with its Pipeline Safety Enhancement Plan (PSEP), which proposes investments that will meet new, industry-wide safety standards and a much-needed next generation of infrastructure upgrades.

PSEP is a long-term proposal, the first phase of which addresses four key areas through 2014:

- **Pipeline modernization.** Test, inspect and replace pipelines as necessary to ensure that every gas transmission pipeline operates at or below proven, tested and verified safe operating pressures, and to allow for state-of-the-art internal inspections, or “pigging.” Our plan proposes to replace more than 180 miles of pipeline, strength test more than 780 miles and retrofit about 200 miles to accommodate in-line inspections.
- **Valve automation.** Install additional remote control valves and automatic shutoff valves to enable the isolation of pipeline segments more quickly in an emergency. We plan to automate more than 220 valves, focusing on pipelines located in highly populated and earthquake prone areas.
- **Pipeline records integration.** Reduce reliance on paper records and move towards a fully electronic asset management system to increase data accuracy, thus, making significant improvements to PG&E’s records and information management.
- **Interim safety enhancement measures.** Enhance the safety margin of our pipelines prior to testing and replacing them, by continuing to validate the MAOP for all gas transmission pipelines in our system and reduce gas pipeline pressure in certain areas. We have also increased the frequency of patrols and leak surveys.

The PSEP also includes significant customer and community outreach to notify and educate affected customers of any work that may impact them and address any concerns they may have.

We recognize there is much more work ahead, but the result of this effort will be significantly higher standards of pipeline safety that better serve our customers.

Modernizing Our Technology and Equipment

PG&E is transforming its gas operations by using new, modern tools and technologies. This includes high-definition cameras and high-tech devices called “smart pigs” to inspect inside our pipelines. We also conducted a first-of-its-kind study of technologies that were mounted underneath helicopters to look for gas leaks on our pipelines.

In 2012, PG&E became the first utility to demonstrate a car-mounted natural gas leak detection device, which is much more sensitive than traditional instruments. PG&E is also using an advanced hand-held leak-detection instrument called Detecto Pak-Infrared (DP-IR) that uses infrared technology to pinpoint methane gas without false alarms from other gases. This technology can detect and grade leaks at the same time.

We also began using [handheld tablet computers](#) to give field personnel access to real-time data and pipeline maps to enable faster response times and improve the customer experience.

Our Electric Operations

It's hard to imagine our world today without electricity. The electric current lights our homes, powers our businesses and is available at the flip of a switch. PG&E's job is to make sure that our electric service is there when our customers need it—day or night, rain or shine, along California's coast, in the Central Valley or high in the Sierras.

PG&E is committed to running the safest and most reliable electric business in the country. To meet that goal, we are investing significant resources in our electric system and focusing on training our operations employees, upgrading the grid, revising processes and giving our employees the skills they need to succeed.



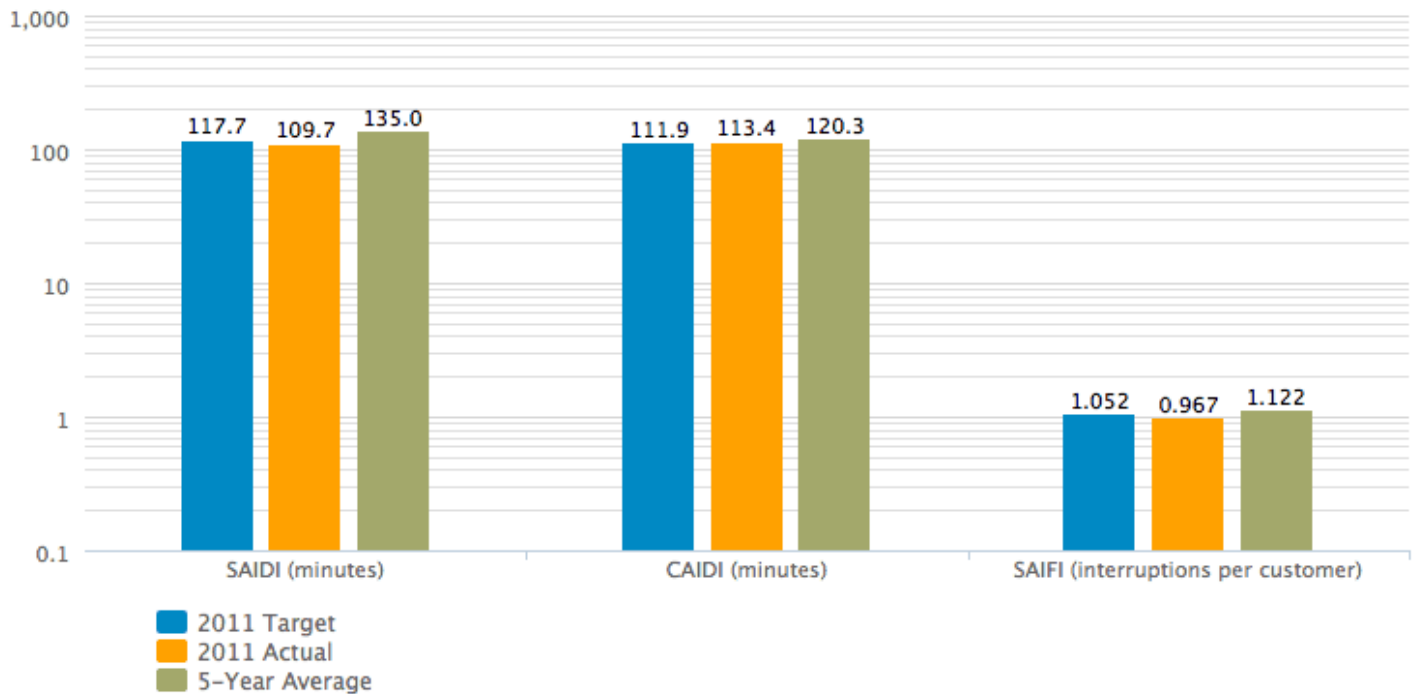
Measuring Our Performance

In 2011, PG&E continued to improve our reliability according to industry-accepted performance measures. In fact, we achieved our best results on record, reducing the average frequency of electric outages, or SAIFI, to the lowest level to date, including an improvement of more than 12 percent over 2010. Compared to 2008, there were approximately 1 million fewer customer interruptions in 2011.

And when the lights did go out for our customers, the wait time to get power restored, or CAIDI, was also shorter: average outage duration in 2011 was 4 percent less than in 2010. Although that was an improvement over 2010 results, it fell short of our target. The average outage duration for each customer served, or SAIDI, exceeded our 2011 goal.

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

Benchmarking PG&E's Reliability Performance



Employee Perspectives



Bruce Henry, a manager in Grid Operations, talks about PG&E's commitment to provide safe and reliable electric service to customers.

Modernizing Our Electric Operations

Our improved performance was the result of strategic planning, smart investments and efficient execution on projects both big and small across our service area. Four current programs, in particular, contributed to the reliability gains we achieved:

- Repairing or replacing the 400 worst-performing electric circuits in our service area. After addressing 83 of these circuits in 2010, PG&E repaired an additional 80 in 2011. In 2010, reliability of the upgraded circuits

improved by more than 50 percent, and we expect similar gains as a result of the work completed in 2011.

- Replacing the cables and wires that carry power to customers. In 2011, PG&E replaced more than 77,000 feet of underground cable, primarily in San Francisco and Oakland, and an additional 53,000 feet of overhead wire. The new cables and wires will be less prone to failure and therefore more reliable, making PG&E's electric system safer for the public and for our employees to maintain and operate.
- Working to keep our transmission and distribution lines free from trees and bushes that could cause outages. In 2011, PG&E inspected more than 130,000 miles of overhead high-voltage line and more than one million trees to help ensure the safe delivery of electricity. As a result of this work, there were 128,000 fewer customer interruptions due to tree-related outages in 2011 than in 2010.
- Proactively upgrading and replacing equipment at our substations. High voltage electric power, which is transmitted on transmission lines, enters our substations and is transformed to a lower voltage before being delivered to homes and businesses on distribution lines. In 2011, PG&E installed or replaced 31 substation transformers to improve reliability and provide capacity to accommodate growing demand.

We also embarked on an ambitious program to automate existing substation equipment, which will enable PG&E to more quickly restore service when it is interrupted.

Committed to Continuous Improvement

PG&E recognizes that its work to provide reliable electric service is far from finished. As part of our back to basics approach, we are focused on making strides in six key areas: public and system safety, employee safety, reliability, compliance, customer service and work efficiency.

To better deliver in each area, we restructured our electric operations organization in 2011 to create clear lines of accountability and facilitate more flexible decision-making at the local level. Additionally, to better measure our performance and understand industry best practices, we performed extensive benchmarking with other utilities. With that information in hand, our teams developed comprehensive performance plans and are putting them into action.

We are working to create a climate where employees actively raise safety concerns, increasing the training our employees receive on key work procedures, improving coordination with local emergency responders and mitigating risks such as those posed by downed electric lines, redesigning work processes and leveraging existing technology, rolling out new technologies and applications for our customers and enhancing our weather modeling to



Last year, Pacific Gas and Electric Company became one of the first utilities in the nation to employ a new technology for manhole covers, which improves public safety. The program, which kicked off in San Francisco and Oakland, will replace traditional manhole covers with ones that stay in place and open a few inches during a power outage incident. This allows fumes from the underground system to safely vent. Their design also prevents oxygen from rushing into belowground enclosures and potentially

respond more quickly to outages.

In 2012, we are working to accelerate pole replacement and maintenance of our overhead and underground facilities as well as fast-tracking technological upgrades. This includes a specific focus on increasing the use of SCADA—wireless devices that allow PG&E to monitor the health of our electric system in real time and respond more quickly to power disruptions.

igniting a fire. In 2011, PG&E installed 690 of these advanced covers, with an additional 800 planned for 2012.

Building a Smarter Grid

PG&E understands that the nation's utilities have an obligation to build a better grid for their customers to deliver safe and reliable electricity as well as to advance energy policy goals such as the integration of renewable energy resources onto the electric grid system. Today, there are promising new technologies that, once diligently tested and piloted on a small scale, can be deployed on a larger scale to electric operations and yield significant benefits.

At PG&E, our Smart Grid vision is consistent with our strategy to introduce proven, sophisticated technology into the business to be able to better serve our customers. The ultimate goal is to create a flexible grid that:

- allows customers to [understand their energy usage and be empowered to make energy related choices](#);
- enables new sources of energy (such as distributed generation and storage, rooftop solar and other energy market participants) to be fully integrated and a functioning part of the grid; and
- allows utilities to continue to operate the grid safely and deliver reliable, cost-effective electricity in the face of more complex and interdependent energy operations.



Careful planning is essential to help ensure that Smart Grid investments are beneficial for our customers and also advance California's energy policy goals. As a major milestone, PG&E provided the CPUC with its [Smart Grid Deployment Plan](#) in 2011. The plan proposed 21 Smart Grid projects that are projected to yield significant benefits, including:

- Avoided capital investment, operations and maintenance and avoided energy procurement costs,
- Reduced system outages and outage duration, and
- Reduced greenhouse gas emissions and other environmental benefits.

Pending regulatory approval, we plan a prudent rollout of these new Smart Grid technologies, piloting and

testing them to understand their capabilities and limitations before implementing them system-wide. The Smart Grid investments will build on the foundation laid by the millions of SmartMeter™ devices installed at customers' homes and businesses, as well as PG&E's existing technology investments in distribution automation to fully leverage already-installed technology. We will also continue to rely on the input of our customers to inform our direction as we move forward.

PG&E's Smart Grid Strategy

PG&E's Smart Grid plan is based on four program areas, with 10 underlying strategic objectives, to guide activities over the next decade.

1. Engaged Customers <ul style="list-style-type: none"> ■ Leverage SmartMeter™ technology to help customers better manage their energy use and save money ■ Integrate demand response resources into electric system operations to improve operational efficiency and lower greenhouse gas emissions ■ Support the expanding market for electric vehicles and accommodate these significant new sources of energy demand in a cost-effective, environmentally sound manner
2. Smart Energy Markets <ul style="list-style-type: none"> ■ Improve the forecasting of market conditions to help ensure reliable delivery of electricity and improve the efficiency of energy procurement ■ Integrate and manage large-scale renewable resources to support California's energy and environmental goals while maintaining grid reliability in the face of intermittency from renewable sources such as wind and solar energy
3. Smart Utility <ul style="list-style-type: none"> ■ Enhance our ability to detect, isolate and restore grid outages to make our electric distribution system more reliable and flexible ■ Enhance our ability to monitor and control the grid system to improve grid reliability and power quality ■ Manage grid system voltage and losses to lower customer energy costs and to safely integrate customer-based rooftop solar photovoltaic (PV) systems ■ Manage the condition of transmission and distribution assets such as transformers, load tap changers and other critical equipment to proactively identify and reduce potential equipment failures
4. Foundational and Cross-Cutting Smart Grid Infrastructure <ul style="list-style-type: none"> ■ Provide foundational infrastructure to support the Smart Grid, including robust telecommunications, cybersecurity, workforce development and other programs

Corporate Governance

We are committed to good corporate governance practices that provide a framework within which the Boards of Directors and management of PG&E Corporation and the Utility can pursue the business objectives of both companies. Transparency, integrity and accountability form the basis of this commitment. We want our many stakeholders to have visibility into our processes, policies and practices so that they are assured we are operating ethically, are able to deliver on our goals and are accountable for our actions.



Corporate Governance Guidelines and Director Independence

The policies and practices described in our [Corporate Governance Guidelines](#) demonstrate PG&E's commitment to good corporate governance practices. The foundation for these practices is the independent nature of the Boards and their fiduciary responsibility to the companies' shareholders.

The companies' Corporate Governance Guidelines set forth a policy that 75 percent of the directors of each company should be independent, as defined in the Guidelines. Additionally, only independent directors may serve on PG&E Corporation's standing board committees, which include the following: Compensation Committee, Finance Committee, Nominating and Governance Committee, Public Policy Committee and the newly established Nuclear, Operations and Safety Committee. Each company's Audit Committee members also must be independent and meet additional independence standards.

Our Corporate Governance Guidelines are published annually in [PG&E Corporation's and Pacific Gas and Electric Company's Joint Proxy Statement](#) and also are available through each company's website, along with our [Bylaws](#), [Board committee charters](#), [codes of conduct for directors and employees](#), [PG&E's Political Engagement Policy](#) and the [PG&E Corporation Disclosure and Guidance Standard](#).

Recent Actions

To further our commitment to good corporate governance and accountability to shareholders, the Boards of Directors of PG&E Corporation and Pacific Gas and Electric Company recently took the following actions.

- Established the Nuclear, Operations and Safety Committee of the PG&E Corporation Board of Directors. This Committee is responsible for the oversight and review of safety, operational performance and compliance issues related to the Utility's operations and facilities (e.g., nuclear, generation, gas and electric transmission, and gas and electric distribution operations), as well as the oversight of the risk management policies and practices for such operations and facilities.

- Expanded the scope of the management-level Risk Policy Committee to include general oversight of the companies' risk management activities, including safety and operations by line of business. This responsibility is in addition to the Risk Policy Committee's oversight of energy procurement transactions and credit/market risk.

Under the Dodd-Frank Wall Street Reform and Consumer Protection Act, effective with their 2011 annual shareholders meeting, large companies were required to (1) provide their shareholders with a non-binding advisory vote on executive compensation paid, or a "say on pay," and (2) at least once every six years, provide their shareholders with a non-binding advisory vote on whether the say-on-pay vote should occur every one, two or three years.

PG&E Corporation and the Utility committed to giving shareholders a "say on pay" well before the Dodd-Frank requirement became effective. In 2009, both companies announced that they would provide shareholders with an annual advisory vote on both executive compensation paid and each company's pay-for-performance compensation policies and practices. The first such vote was offered at the companies' 2010 annual meetings and earned approval from 96.1 percent and 99.8 percent, respectively, of PG&E Corporation and Utility shares that voted.

At the companies' 2011 annual meetings, PG&E Corporation and the Utility again provided shareholders with a say on pay. In 2011, the companies also provided shareholders with a non-binding advisory vote on the frequency of the advisory say-on-pay vote. In keeping with the companies' 2009 commitment, the Boards recommended that shareholders vote for a frequency of one year. The shareholders of each company approved a one-year frequency for the say-on-pay vote. In addition, in the companies' 2011 say-on-pay vote, PG&E's executive compensation was approved by 97.8 percent and 99.9 percent, respectively, of PG&E Corporation and Utility shares voted.

Also in 2011, PG&E Corporation and the Utility expanded their proxy statement disclosure on director qualifications and the oversight role of the Boards with respect to risk management, political contributions and management succession, among other items.

Governance Structures

The Boards of Directors of PG&E Corporation and the Utility are regularly engaged in governance matters, including those related to environmental performance, corporate responsibility and political activities. For example, the Public Policy Committee of the PG&E Corporation Board has specific oversight of many of the areas addressed in this Corporate Responsibility and Sustainability Report, including but not limited to corporate philanthropy, community involvement, supplier diversity, workforce diversity, climate change and the quality of the environment. In addition, the Public Policy Committee oversees issues pertaining to political contributions and related activities.

PG&E has structures in place to assure stakeholders that all activities related to the myriad aspects of corporate responsibility and our political activities are consistently measured, implemented and reported to the PG&E Corporation and Utility Boards of Directors.

For example, PG&E’s total community investment budget and individual charitable commitments of more than \$1 million are approved by the Boards of Directors of PG&E Corporation and/or the Utility. Smaller donations are approved by the PG&E Corporation CEO or staff executives within the Corporate Affairs department, working with colleagues from throughout PG&E. To reduce the potential for conflicts of interest, no one may approve a charitable donation from PG&E funds to an organization in which they or family members have a financial interest, including serving on the organization’s board of directors. Community investments are [publicly disclosed](#) on the Utility’s website. [Learn more about PG&E’s community investments.](#)

In addition, the Public Policy Committee reviews PG&E’s political contributions program and recommends to the PG&E Corporation and Utility Boards and senior 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. The Public Policy Committee also directs the preparation of an annual report detailing political contributions made by PG&E during the preceding year.

Consistent with PG&E’s values, PG&E Corporation and its affiliates and subsidiaries are committed to full compliance with both the letter and the spirit of all 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:

- Political action committees (PACs);
- Political parties and other organizations that engage in voter registration and similar activities that encourage citizen involvement in the political process; and
- Non-profit 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 the political process. All eligible employees may make voluntary contributions to the company’s political action committees: 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 at both the federal and state levels as well as other committees. By law, PG&E cannot use corporate funds to make contributions to federal candidates.

In 2011, PG&E Corporation Employees EnergyPAC and Pacific Gas and Electric Company State and Local PAC made contributions of \$237,750 and \$10,000, respectively. PG&E contributed \$2,060,216 to state and local political candidates, ballot measures, political parties and other committees. Disclosure of our [annual political contributions](#) is publicly available on PG&E Corporation’s website.

Political Contributions—2011	
PG&E Employees Federal PAC Contributions	
U.S. House	\$94,250.00

Political Contributions—2011	
U.S. Senate	\$21,000.00
Leadership/Other PAC	\$122,500.00
Total	\$237,750.00
PG&E Employees State and Local PAC Contributions	
Total	\$10,000.00
Corporate Campaign Contributions	
Total California Corporate Contributions to Candidates	\$220,575.00
Total Corporate Contributions to Other Committees	\$1,839,641.36
Total	\$2,060,216.36

PG&E also discloses its [policies and procedures on its lobbying activities and trade association payments](#), including portions of its annual membership dues over \$50,000 to trade associations that are used for political purposes.

Trade Association Dues—2011¹	
Portion of Dues That Were Non-Deductible	
Total	\$513,979

¹ Represents the portion of membership dues to trade associations that was non-deductible 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.

Corporate Governance Rankings

PG&E's corporate governance practices have been evaluated and rated by several institutional shareholder groups and corporate governance organizations. We have consistently received ratings that are well above average compared with other utility companies, as well as general industry companies.

As of April 24, 2012, Institutional Shareholder Services, Inc. (ISS), an independent provider of risk management and corporate governance products and services to financial market participants, rated PG&E Corporation's governance practices "low concern" (based on a low, medium or high level of concern) in the audit, board structure and shareholder rights categories. ISS rated PG&E Corporation "high concern" in the compensation category, while still supporting the company on its 2012 say-on-pay proposal.

Risk and Compliance Management

PG&E's goal is to deliver safe, reliable and affordable gas and electric service to the millions of homes and businesses that depend on us. Numerous operational risks affect the provision of gas and electric service, including factors such as seismic activity and wildfires. Although risk cannot be entirely eliminated, PG&E is committed to effectively managing these operational risks and taking all reasonable measures to provide gas and electric service to our customers in a manner that helps ensure the safety of the public, our customers and our employees.



A Spectrum of Risks

PG&E manages risk throughout the enterprise:

- **Operational Risk Management** includes activities that manage risks that could have a potentially catastrophic impact on public and employee safety, customer service or PG&E's financial condition.
- **Physical Risk Management** includes security and access control, theft prevention, cybersecurity, fire prevention and management of risks associated with our physical plant.
- **Compliance Risk Management** includes all programs designed to help ensure that PG&E complies with both the spirit and the letter of all regulatory requirements.
- **Market and Credit Risk Management** includes activities that monitor and manage PG&E's exposure to risks associated with PG&E's energy portfolio, including trading in energy commodities, financial hedging and counterparty risk.

Developments During 2011

During 2011, PG&E Corporation and the Utility refined their approach to risk management in two specific ways: first, by bringing increased Board-level attention to the area of safety and operational risks; and second, by further empowering the operational lines of business to identify, assess and manage operational and safety risks within each business area, and then raising those issues to the applicable Board as appropriate.

The PG&E Corporation Board of Directors established a new Nuclear, Operations and Safety Committee that is responsible for, among other things, specifically discussing risks related to public and employee

safety, operational performance and compliance issues related to the Utility's nuclear, generation and gas and electric transmission and distribution operations.

The PG&E Corporation Board expanded the scope of the management-level Risk Policy Committee (RPC) beyond its prior duties to oversee energy procurement transaction and credit and market risk. The RPC now is generally responsible for overseeing PG&E Corporation's and the Utility's management-level risk management activities, including those related to safety and operational issues. The RPC also reviews risks identified by the lines of business (see below) and recommends new risks for Board review, as appropriate.

Each line of business (LOB) within the companies is establishing its own risk and compliance committee. These LOB committees review all major operational and safety risks within that LOB (including public safety), review and approve risk analyses and mitigation strategies and track mitigation progress. These committees also identify risks that should be brought to the RPC. Each LOB risk and compliance committee is led by a senior officer and must include at least one appointed risk manager with expertise in risk management and compliance.

These enhanced risk management structures provide additional focus on operational and safety issues. They also allow risks to be investigated under the established Board-directed review process, as well as from a "bottoms-up" approach that allows operational experts to add their knowledge and identify emerging issues for the companies.

Board-Level Duties

The Boards and their committees have specific oversight responsibility for risk management in the following areas:

- The Boards evaluate risks associated with major investments and strategic initiatives, with assistance from the PG&E Corporation Finance Committee.
- The Boards oversee the implementation and effectiveness of the overall compliance and ethics programs, with assistance from the PG&E Corporation and Utility Audit Committees.
- Each company's Audit Committee discusses the guidelines and policies that govern the processes for assessing and managing major risks, allocates to other Board committees the specific responsibility to oversee identified key operational risks and considers risk issues associated with overall financial reporting and disclosure processes.
- The PG&E Corporation Finance Committee discusses risk exposures related to energy procurement, including energy commodities and derivatives, and other key operational risks, as assigned by the Audit Committees.
- The PG&E Corporation Nuclear, Operations and Safety Committee discusses risks related to the Utility's nuclear and other operations and facilities, safety and other key operational risks, as assigned by the Audit Committees.

- The PG&E Corporation Compensation Committee oversees potential risks arising from the companies' compensation policies and practices.

Other risk oversight responsibilities also have been allocated, consistent with each committee's substantive scope. For a full description of Board committee oversight responsibilities, please see PG&E Corporation's and Pacific Gas and Electric Company's [2012 Joint Proxy Statement](#).

Internal Audit: An Important Tool in Managing Risk

Our Internal Auditing program provides independent, objective assurance over the adequacy of processes and controls to manage business risk and provide control advisory services. The program follows a standardized, disciplined approach to help management evaluate and improve the effectiveness of risk management, control and governance processes.

To carry out its work, our Internal Auditing program annually designs a plan—in conjunction with LOB senior management—that focuses audit attention on high-risk areas. Through its work, Internal Audit assesses, monitors and reports on the adequacy of internal controls in areas such as energy procurement, information technology, energy delivery, customer care and capital projects. The Audit Committees of the PG&E Corporation and Utility Boards receive periodic reports on audits conducted, progress made implementing the annual audit plan and on changes made to the audit plan.

Driving Compliance and Ethical Conduct

PG&E's operations are subject to laws and regulations issued by more than 150 federal, state and local governmental bodies. Our [Compliance and Ethics](#) department works with organizations throughout the business to help employees and the companies comply with these requirements, operate ethically and drive process improvement across compliance activities.

PG&E's [Employee Code of Conduct](#) emphasizes PG&E's values, describes our standards of conduct and addresses key regulatory and compliance requirements. Annually, PG&E takes a number of steps to help ensure that every active employee knows about the code, including a process for management employees to certify that they have read, understand and will comply with the code. Union-represented employees receive electronic reminders or briefings from supervisors about the code.

We plan to update certain sections of the code in 2012 to stay current with a changing ethics landscape, such as how employees may use social media in a business setting. We also continue to refine the code to respond to new conduct issues and trends.

Just as we are committed to ethical business conduct and compliance with applicable laws, regulations and policies, we expect the same commitment from our vendors and Boards of Directors. In December 2011, the Boards of Directors reaffirmed their [Code of Business Conduct and Ethics for Directors](#). In 2011, we also reissued our [Code of Conduct for Contractors, Consultants, Suppliers and Vendors](#) to all of our suppliers.

To emphasize our commitment to an ethical culture, in 2011, we laid groundwork for an Ethics Council, which was formally established in early 2012. The Council is convened quarterly by the Chairman, CEO and

President of PG&E Corporation and includes management and union-represented employees, as well as the leaders of our two largest labor unions. It provides a forum to discuss, review and address issues relating to business ethics and conduct at PG&E.

Other key steps we've taken to enable employees to meet compliance commitments include:

- Maintaining a network of Compliance Champions to lead efforts in their organizations to identify compliance requirements, understand the relative risks of those requirements, establish appropriate controls to help ensure compliance and monitor those controls to help ensure they are both efficient and effective.
- Developing a compliance "scorecard" and launching line of business risk and compliance committees that are enabling each organization to identify and address appropriate focus areas.
- Continuing to expand an Enterprise Compliance Tracking System to help manage the thousands of compliance requirements applicable to PG&E. The system allows PG&E to maintain an inventory of requirements, work processes and controls and to assign compliance tasks to the employees responsible for completing them.
- Improving the way in which our standards and procedures are written and communicated. Our goal is to help employees who use those documents to perform their work safely, correctly, efficiently and in compliance with laws, regulations and internal requirements, while minimizing the opportunity for human error.

In 2011, more than 99 percent of employees completed our annual compliance and ethics training, which is typically conducted in small groups to stimulate discussion and share experiences. Each year, a new training video addresses current issues and responds to employees' suggestions. We supplemented the training with five additional conduct-related briefings that supervisors could conduct with their work groups throughout the year.

We continue to encourage employees to ask questions and raise concerns with their supervisors or through other means. For example, PG&E's Compliance and Ethics Helpline is available to employees, contractors and customers 24 hours a day. Calls are confidential, and callers may remain anonymous.

The volume of Helpline calls we received in 2011 was within the average range, roughly 2.5 calls per 100 employees. We believe this reflects a broad awareness among employees that the Helpline is an avenue to raise concerns. In 2011, the largest percentage of concerns related to interactions between employees. The next largest category was calls from employees who recognized possible misconduct or conflict of interest issues.

We respond to callers promptly, investigate their concerns and follow up with them to provide closure. We also review data about the calls to identify trends and develop approaches to address those trends broadly.

We also continue our practice of posting on PG&E's internal website confirmed instances of employee

misconduct and the resulting discipline. This supports a culture where appropriate conduct is expected and reinforces the fact that PG&E takes misconduct seriously and takes steps to address it.

Engaging Stakeholders

Engaging with our stakeholders is an essential part of our approach to sustainability—and an area of continued emphasis for PG&E. Doing so enables us to learn from, inform and problem-solve with our diverse stakeholders. We use a variety of formal and informal methods and venues to engage with our stakeholders.



Our stakeholder engagement efforts include actively working with [Ceres](#), a leading nonprofit that works with companies to address sustainability challenges. In preparation for this report, Ceres once again facilitated a dialogue with a group of our stakeholders on steps we can take to improve our disclosure and performance and realize our goals going forward. This discussion included thought leaders from different stakeholder constituencies, such as business customers and suppliers, investors, workforce development experts and environmental and community groups.

In addition, PG&E is regulated by numerous federal and state government agencies. Pacific Gas and Electric Company is regulated primarily by the [California Public Utilities Commission](#) and the [Federal Energy Regulatory Commission](#), while the [Nuclear Regulatory Commission](#) regulates the licensing, operation and decommissioning of our nuclear generation facilities. As a result, we are engaged in multi-stakeholder public processes convened by these and other regulatory agencies.

The chart below highlights some of our recent engagement with stakeholder groups. Other examples of ongoing stakeholder engagement include participating in numerous multi-party coalitions and working groups, such as the [California Utilities Diversity Council](#), the [California Environmental Dialogue](#), the [Silicon Valley Leadership Group](#), and the [Stakeholder Committee of the Desert Renewable Energy Conservation Plan](#).

Category	Selected Examples of Groups	Channels of Engagement	Recent Examples
Customers and Communities			
Business and residential customers	<ul style="list-style-type: none">■ 5.2 million electric accounts■ 4.3 million natural gas accounts	<ul style="list-style-type: none">■ Regular quantitative and qualitative customer studies (online, phone, one-on-one, in-person)	<ul style="list-style-type: none">■ PG&E conducted a system-wide “listening tour” where we heard candid feedback directly from customers.

Category	Selected Examples of Groups	Channels of Engagement	Recent Examples
		<ul style="list-style-type: none"> ■ Customer data and insights to drive our decision-making and help simplify our customer service offerings and the way we engage with customers ■ Open houses for the public on key projects ■ Business customer account representatives focused on customer energy solutions ■ Gas service representatives ■ Customer call centers, local offices and helplines ■ Financial assistance programs for low-income customers ■ Online tools to help customers see how and when they use energy ■ Staff dedicated to engage in regular dialogue 	<ul style="list-style-type: none"> ■ Following the tour, we have maintained ongoing dialogue with customers through customer advisory panels in different regions of our service area. ■ These advisory panels meet with PG&E executives quarterly and consist of both residential and small and medium business customers and serve an ongoing advisory role to help improve the way we are doing business.
Emergency First Responders	<ul style="list-style-type: none"> ■ Police, firefighters and emergency medical technicians ■ Public safety officials 	<ul style="list-style-type: none"> ■ Local public safety team available to engage local stakeholders, raise safety awareness, promote prevention and work with first responders to develop and test emergency response plans ■ Workshops throughout our service area for local emergency agencies ■ Practice drills and training with first responders to simulate emergency response events and prepare for gas and electric-related emergencies 	<ul style="list-style-type: none"> ■ We are holding workshops throughout our service area for local emergency agencies to increase coordination and planning in the event of a utility-related emergency. ■ In 2011, the workshops reached more than 500 people; significantly more workshops are planned for 2012. ■ We conducted an exercise with PG&E personnel and state and local agencies to simulate an emergency event and develop a coordinated response.

Category	Selected Examples of Groups	Channels of Engagement	Recent Examples
		<ul style="list-style-type: none"> ■ Meetings with local governments and agencies ■ Online access to critical PG&E infrastructure information for authorized first responders 	
Non-governmental organizations	<ul style="list-style-type: none"> ■ Environmental organizations ■ Community organizations 	<ul style="list-style-type: none"> ■ Active participation of officers and other employees on non-profit boards ■ Support for local programs through community investments ■ Employee volunteers ■ Meetings, conferences and community events ■ Participation in coalitions and networks ■ Staff dedicated to engage in regular dialogue 	<ul style="list-style-type: none"> ■ We launched a Community Advisory Council, which provides a forum for stakeholders to share feedback and engage in an ongoing dialogue with PG&E about issues of importance to them and the diverse communities they represent. ■ The Council includes local community organizations, businesses and workforce development groups.
Employees			
Current, Prospective and Retired Employees	<ul style="list-style-type: none"> ■ Employee Resource Groups ■ PowerPathway™ Program 	<ul style="list-style-type: none"> ■ Clear vision, values and guiding behaviors for all employees ■ Employee engagement survey ■ Awards to recognize employee leadership on diversity, safety, volunteering and the environment ■ Mentoring program ■ Regular briefings, meetings and communication ■ PG&E Academy ■ Active recruiting ■ Monthly newsletter sent to 	<ul style="list-style-type: none"> ■ In 2011, more than 7,500 employees provided feedback on PG&E's safety policies, programs and day-to-day actions for a comprehensive assessment of our safety climate. ■ This included extensive focus groups, surveys, employee interviews and on-site visits.

Category	Selected Examples of Groups	Channels of Engagement	Recent Examples
		all retirees	
Labor Unions	<p>Approximately two-thirds of our employees are covered by collective bargaining agreements with three labor unions:</p> <ul style="list-style-type: none"> ■ IBEW, Local 1245 ■ ESC/IFPTE, Local 20 ■ SEIU, United Service Workers West 	<ul style="list-style-type: none"> ■ Labor and management joint learning sessions on key topics ■ Co-hosted sessions on the importance of employee and public safety ■ Labor and management joint engagement to simplify business processes 	<ul style="list-style-type: none"> ■ We worked with our unions 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.
Business Community			
Investors	<p>As of December 31, 2011:</p> <ul style="list-style-type: none"> ■ Approximately 74 percent of PG&E Corporation's shares were held by institutional investors ■ The top 50 institutional investors owned approximately 61 percent of our stock 	<ul style="list-style-type: none"> ■ Quarterly earnings calls and press releases ■ Annual investor conference ■ One-on-one meetings and industry conferences ■ Required disclosures ■ Surveys from socially responsible investors ■ Annual surveys of top institutional investors regarding corporate governance 	<ul style="list-style-type: none"> ■ We hosted approximately 15 meetings for investors and analysts at our corporate headquarters. ■ We attended sell-side conferences or met with investors at their offices. ■ We contacted our top 100 institutional investors and conducted conference calls with those who requested dialogue on corporate governance matters.
Suppliers	<ul style="list-style-type: none"> ■ Diverse suppliers (women-, minority- and disabled-veteran-owned businesses) ■ Small businesses ■ Large businesses 	<ul style="list-style-type: none"> ■ Annual Supplier Conference, which includes supplier awards ■ Supplier Diversity Program with specific spending targets ■ Green Supply Chain Program ■ Facilitating supplier-to-supplier mentoring relationships ■ Engagement with ethnic chambers of commerce, 	<ul style="list-style-type: none"> ■ To exceed our aspirational goal for supplier diversity, we worked with our prime suppliers to identify new opportunities to engage diverse suppliers. This included asking prime contractors to set goals and report subcontracting monthly, detailing their progress toward these goals. ■ We chaired the Electric Utility Industry Sustainable Supply Chain Alliance in 2011, a consortium that is working collaboratively on greening the

Category	Selected Examples of Groups	Channels of Engagement	Recent Examples
		veteran business organizations, and other groups to reach diverse suppliers	<p>utility supply chain.</p> <ul style="list-style-type: none"> ■ We will continue to expand our technical assistance program by introducing a new training program, “Diverse Suppliers Are Safe,” an initiative focused on enhancing safety within the work environment.

Safety



Safety has long been a key component of our sustainability strategy at PG&E. In 2011, we redoubled our focus on public and employee safety and have dedicated significant time and resources to assess our overall safety programs and processes.

Our findings have helped to shape new thinking and initiatives as we more deeply ingrain public and employee safety into our operating strategies. This includes putting a governance structure in place that is much clearer and better aligns resources and accountability. Reflecting our enhanced commitment, we have added public and employee safety to PG&E's formal values statement and created an expanded set of public and employee safety metrics to measure our progress in this critical area.

Key Sustainability Indicators

● = meets or exceeds target ● = below target ● = substantially below target

2011 Target	Progress	2011 Result	2012 Target
Public Safety			
Beginning in 2012, PG&E created a set of public safety metrics to measure our progress in this critical area. We will provide updates in future reports.			
Nuclear Operations ¹	—	—	PG&E's nuclear power operations maintain first quartile performance in the industry.
Leak Repair Performance	—	—	42% improvement over 2011 in number of grade 2 leak repairs completed by year-end.
Gas Emergency Response	—	—	15% improvement over 2011 in the percentage of time a Gas Service Representative is on-site within 30 minutes and within one hour of receiving emergency service calls.
Transmission & Distribution Wires Down (unplanned outages)	—	—	3% reduction over 2011 in number of wire down events with resulting sustained unplanned outages.
Electric Emergency Response	—	—	7% improvement over 2011 in the percentage of time PG&E personnel relieve 911 personnel at the site of a potential PG&E electric hazard within one hour of receiving emergency service calls.
Employee Safety			
Lost Workday Case Rate: ² 0.344 (13% reduction from 2010 incident rates)	●	0.273	0.240, a 12% reduction over 2011.

Preventable Motor Vehicle Incident Rate: ³ 2.15 (10% reduction from 2010 incident rates)		2.10	1.95, a 7% reduction over 2011.
OSHA Recordable Rate: 1.600 (13% reduction from 2010 incident rates)		1.621 ⁴	Beginning in 2012, this metric is being tracked with no target to ensure appropriate incentives to report incidents.

¹ Refers to 12 performance indicators for nuclear power generation reported to the Institute of Nuclear Power Operations and compared to industry benchmarks.

² Refers to the 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.

³ Refers to the number of chargeable motor vehicle incidents per one million miles driven. A chargeable incident is one where the employee-driver could have prevented an incident, but failed to take reasonable steps to do so.

⁴ PG&E excludes Standard Threshold Shift (STS) OSHA Recordables, a certain type of hearing-loss case, from its internal statistics. Including STS cases increases the OSHA Recordable Rate to 1.803.

Strengthening Our Commitment

All 20,000 men and women of PG&E share the responsibility for public and employee safety. Our focus in 2011 included putting in place the organizational infrastructure to help drive continued improvements on safety.



In 2011, we appointed a lead safety officer who is working with an Executive Safety Steering Committee to spearhead a comprehensive safety strategy for PG&E.

We also created a Chairman's Safety Review Committee to regularly review PG&E's safety practices and programs. Led by the Chairman, CEO and President of PG&E Corporation, the committee is focused on fostering a culture that embeds safety into all aspects of our operations and our relationships with employees, customers, suppliers and others. It includes leadership from both the IBEW and ESC labor unions, as well as both management and union-represented employees, to bring a diversity of perspectives and experience to bear on this crucial element of our success.

There are many complementary efforts as well, including a quarterly health and safety meeting with the IBEW labor union, safety discussions at ongoing labor-management meetings with the IBEW and ESC, and an active employee-driven safety program in which union-represented employees participate and often lead.

As part of our commitment to safety, in 2011, the Compensation Committee of the PG&E Corporation Board of Directors applied both a quantitative and qualitative assessment to our public and employee safety performance when determining management employee compensation.

We are now tying safety more closely to compensation than ever before. Safety performance measures—which have been expanded now to encompass not only employee safety but also public safety—determine 40 percent of management's annual at-risk performance-based pay in 2012. This is now the single largest driver for annual at-risk performance-based pay, with financial performance and customer service each representing 30 percent of the total.

Together, these steps are helping to change our safety climate and helping eliminate serious employee and public safety incidents. In fact, in 2011, we extended a trend of recent improvements by once again reducing on-the-job injuries as well as the numbers of lost workdays and motor vehicle incidents. However, our continued progress was overshadowed by the loss of three employees last year and our ongoing need to improve our operations to the level our customers deserve. These events served as a somber reminder of our need for continuous improvement and have further sharpened our focus on ensuring that the safety of the public and our employees is at the center of everything we do.

Public Safety

Our long-term goal is to have the safest operations in the country. Our customers and stakeholders won't accept anything less, and neither will we.

Achieving the safest gas and electric systems possible is PG&E's highest priority and responsibility. In 2011, we redoubled our efforts and our commitment to public safety while continuing to strengthen our focus on our internal safety culture and [employee safety](#).



Embedding Public Safety into Our Operating Strategies

Following the San Bruno accident in 2010, in which a natural gas transmission pipeline owned and operated by PG&E ruptured, we launched a comprehensive review of our gas operations that we extended to eventually encompass all of PG&E. Working with the CPUC, we are in the process of completely overhauling our gas unit and making substantive changes to how we operate on a daily basis. Although we're far from finished, we have taken [numerous steps](#) to promote public safety across our gas system.

A partial list from 2011 includes:

- Reducing pressure on more than 900 miles of gas transmission pipelines to provide a greater margin of safety on our operating pipelines;
- Hydrostatically testing 163 miles of transmission pipeline running through densely populated areas;
- Validating the maximum allowable operating pressure (MAOP) on approximately 2,000 miles of transmission pipeline, primarily transmission pipelines running through urban, populated areas known as high consequence areas;
- Gathering, scanning and uploading more than 2.3 million paper documents into electronic files going back more than 50 years;
- Installing five new automated valves, automating six existing valves and upgrading two valves that already had remote control capabilities; and
- Increasing patrols and leak surveys.

We are also investing unprecedented resources in [our electric system](#) as we work toward running the safest

and most reliable electric business in the country. There were several important highlights last year:

- Pacific Gas and Electric Company (Utility) became one of the first utilities in the nation to employ a new technology for manhole covers that improves public safety. The program will replace traditional manhole covers with ones that stay in place and open a few inches during a power outage incident.
- We replaced significant amounts of the cables and wires that carry power to customers. The new cables and wires will be less prone to failure, making PG&E's electric system safer for the public and for our employees to maintain and operate.
- We used information gathered from SmartMeter™ technology to help coordinate and restore service to customers when storms impacted our service area last year. The technology allows us to more quickly respond to equipment failures that in some cases may pose a public safety risk.
- We continued to manage vegetation along our electric lines, working to keep transmission and distribution lines clear from trees and bushes and reducing the risk of fires and outages.

Looking forward, PG&E's operating plans and goals for 2012 and 2013 revolve predominantly around work that we are prioritizing and in many cases accelerating to enhance the safety of our systems. In fact, PG&E has dedicated \$200 million in both 2012 and 2013 beyond what the Utility is authorized to recover in rates to complete work planned for future years that will improve both system safety and customer service.

Emergency Preparedness and Public Awareness

PG&E is increasing coordination with local officials and first responders in communities across our service area, sharing crucial information on PG&E's systems and bringing an added degree of collaboration and emergency preparedness for both PG&E and these stakeholders.

Our focus is on two key areas:

- **Preparedness:** We published a Gas Emergency Response Plan in 2011, which we will update annually. The plan, which incorporates industry best practices, allows us to enhance our skills and work collaboratively with public safety first responders in advance of an incident to learn and practice together.
- **Public Awareness:** PG&E's efforts here focus on two areas: first, interacting with our first responder counterparts in a standardized way to strengthen awareness about the protocols to use in the case of a gas or electric emergency; and second, increasing outreach to a range of other stakeholders—including departments of public works, contractors, elementary schools and other



PG&E has added six Mobile Command Vehicles to our fleet—two large coaches and four vans—to be dispatched to an emergency to facilitate communications between response crews, command staff and government agencies. Each vehicle is equipped with workstations, mapping tools, TV monitors and radio and satellite communications.

members of the community—to prevent incidents such as contact with utility assets from occurring.

We are partnering with first responders and public safety officials to enhance emergency preparedness training programs. This includes increasing the number of educational and interactive sessions—including practice drills—held with first responders to simulate emergency response events and prepare for gas and electric-related emergencies.

We are also holding workshops throughout our service area for local emergency agencies. During these workshops, first responders engage with local PG&E operations leadership and receive safety information to protect first responder personnel and the public in the event of a utility-related emergency. Last year, the workshops reached more than 500 people and covered topics such as PG&E's Gas Emergency Response Plan, the local area gas transmission and distribution system, and dispatch procedures. The number of workshops has increased significantly in 2012.

Additionally, we continued to meet with local governments and agencies to discuss gas pipeline safety plans—organizing meetings with cities, counties and other community groups to respond to questions and concerns.

Raising Awareness about Public Safety

PG&E continues to focus on increasing awareness among our customers about the safe use of gas and electricity and to provide safety educational materials to groups that routinely work around utility lines.

This includes our efforts to remind customers to call us when they find a downed wire or to “[Call 811 Before You Dig](#)” to have underground utility lines marked prior to any digging project.

We are also increasing our presence in local communities through a public safety team so that PG&E employees are present and available to engage local stakeholders, raise safety awareness, promote prevention and work with local first responders to develop and test emergency response plans. This team will also partner with a gas emergency planning team to identify best practices from the workshops with first responders; participate in exercises, drills and training; and identify areas for improvement in PG&E's gas emergency response efforts.

PG&E also maintains an [interactive online tool](#) in coordination with Google that makes available the location of transmission pipelines in customers' neighborhoods. Customers can enter an address to view pipeline locations throughout PG&E's service area and, for more specific information, can obtain personalized gas transmission pipeline information by logging in to their PG&E account at www.pge.com.

PG&E's website also includes information on using [gas safely](#), [responding to gas odors and pilot light failures](#) and the [dangers of carbon monoxide](#). Electric safety topics covered include [electric appliance](#) and



generator safety, how to turn electricity on and off and how to safely light a home. We also offer important information on emergency preparedness.

Examples of other safety-awareness activities include:

- **SafeKids School Public Safety Program.** Over the past decade, PG&E has offered free electric and natural gas safety education to K-8 teachers in schools across our service area. In 2011, elementary and middle school teachers requested more than 271,000 utility safety booklets and posters to be used in their classroom. In the last decade, PG&E has provided public safety educational materials to more than 3.5 million students and families.
- **Contractor and Agricultural Worker Public Safety Outreach.** PG&E continues to provide electric and natural gas safety training materials to contractors and agricultural workers throughout our service area. These materials include bilingual brochures, posters and videos. In 2011, more than 169,000 safety education materials were distributed across the construction industry and more than 40,000 were distributed across the agricultural industry.

Measuring Our Performance

Recognizing the critical importance of public safety, PG&E has set specific goals for a set of five public safety measures. Our 2012 report will share PG&E's performance on these measures, which join the metrics already in use to gauge performance on employee safety, including our Lost Workday Case Rate and Motor Vehicle Incident Rate.

To hold ourselves to an even higher standard, PG&E is directly tying management employee compensation to performance on these seven measures in 2012.

Employee Safety

PG&E's goal when it comes to employee safety is simple: zero employee injuries. To get there, we are working toward embedding safety into our operational practices and culture; focusing on process safety and compliance with all internal and external requirements; and engaging employees through feedback mechanisms, grassroots efforts and training to strengthen job skills.

Our expectation is that the more than 20,000 men and women of PG&E, individually and as a group, share the responsibility to turn around our safety performance.



Changing our Culture

We are actively working to engage our employees around a stronger culture of safety—one where everyone feels confident to talk openly about honest mistakes, report near-hits and hazardous conditions and actively look for and correct unsafe acts or conditions.

Last year, more than 7,500 employees provided feedback on PG&E's safety policies, programs and day-to-day actions for a comprehensive assessment of our safety climate. The assessment, which was a key part of our renewed focus toward safely and reliably providing gas and electric service to customers, was extensive. It involved employee-led focus groups, surveys, employee interviews and on-site visits.

We also conducted extensive benchmarking to evaluate and improve the effectiveness of our safety programs.

Improving Process Safety

We are focused on increasing adherence to established work procedures and improving process safety and compliance.

For example, an improved near-hit reporting process is being implemented in 2012. We are also rolling out a Leadership Observation program that is intended to reinforce the importance of following our work procedures and improving communication around safety.

Another initiative, known as Process Safety Management, focuses on safety as a key part of how we design, build, operate and maintain our systems. This includes documenting the work that has been performed—the final, but essential, step to be completed before we can say a job is done.

Providing Training to Strengthen Job Skills

In our industry, hands-on training, continuing education and a focus on knowledge transfer are essential elements of a successful safety strategy. We are working to build and sustain the workforce PG&E will need to thrive by leveraging new technologies, increasing the quality of our training programs and creating a work environment where different views and backgrounds are welcomed and encouraged.

For example, [PG&E's Pre-Apprentice Lineworker Program](#), developed in collaboration with the IBEW, provides candidates with formal training and assessments. Those who complete the one-year program become apprentice linemen, the beginning of a multi-year apprenticeship.

We also continue to provide our employees with [training on technical topics](#). This includes offering training for new gas engineers, for technicians on new valves being installed and for hundreds of other employees on documentation and record retention.

We have also called on our employee leaders, whose help is critical in creating and sustaining a work environment where safety comes first. In 2012, we are rolling out a program focused on how supervisors can work with their employees to build a trust-based safety climate.

Measuring our Performance

In 2011, PG&E used several key metrics to assess progress on employee safety performance: our OSHA Recordable Rate, Lost Workday Case Rate and Preventable Motor Vehicle Incident Rate. (These metrics are defined below.) We set aggressive targets for safety in 2011, aiming for a 13 percent reduction in the OSHA Recordable Rate and Lost Workday Case Rate and a 10 percent reduction in the Preventable Motor Vehicle Incident Rate, compared to a 2010 baseline. Beginning in 2012, PG&E decided not to set targets for the OSHA Recordable Rate to focus on the prevention of incidents and to ensure appropriate incentives to report incidents.

The table below provides complete employee safety statistics for 2009 through 2011:

Safety Results for 2009 through 2011 (Utility)

	2009	2010	2011
Total Lost Workdays ¹	28,959	27,477	25,635
Total Lost Workday Cases ²	89	78	57
Total Lost Workday Case Rate ³	0.441	0.395	0.273
Total OSHA Recordables ⁴	494	386	377
OSHA Recordable Rate ⁵	2.45	1.955	1.803

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.

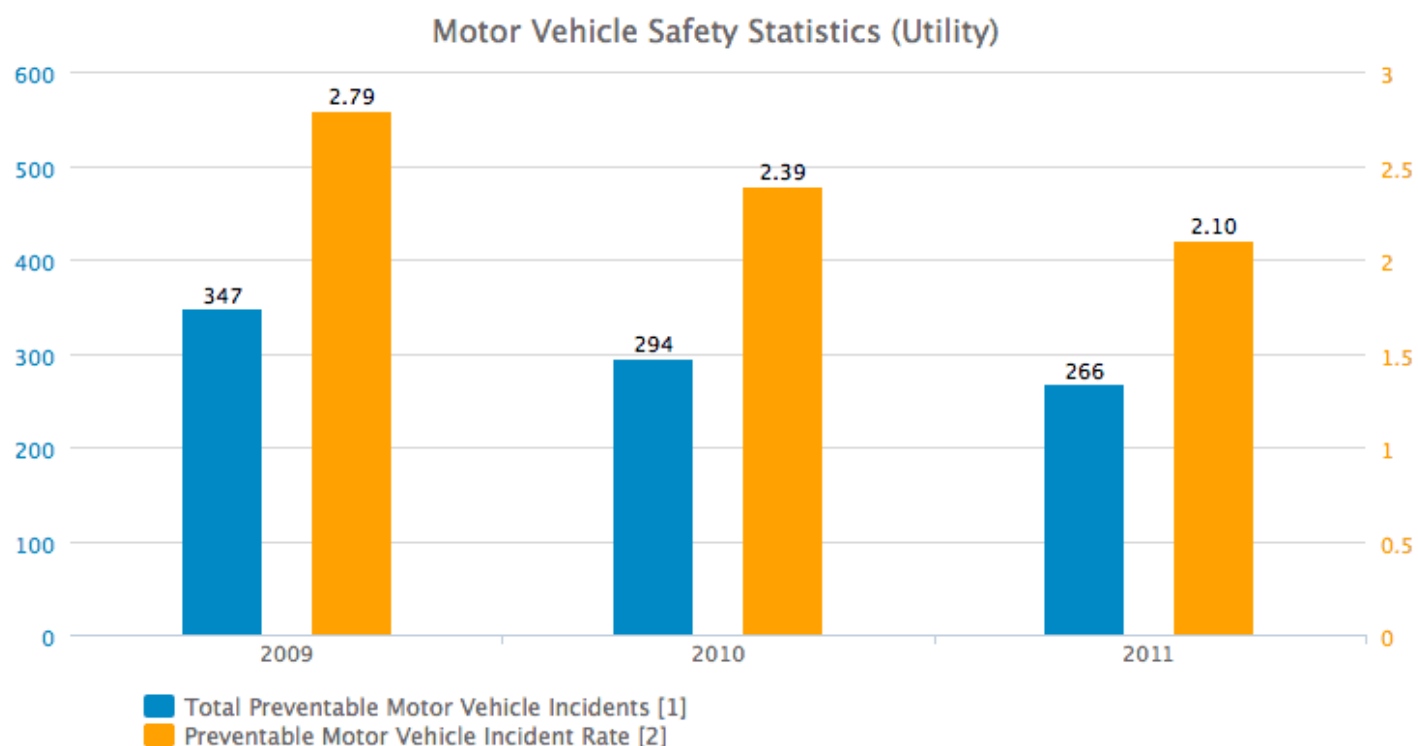
⁴ Total OSHA Recordables is the number of injuries and illnesses that meet OSHA requirements for recordability, i.e., (1) are work-related, (2) are new cases and (3) meet one or more OSHA general recording criteria.

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.

PG&E employees logged more than 110 million miles in PG&E vehicles in 2011—a clear indication of just how essential the safe operation of our large fleet of vehicles is to PG&E’s employee and public safety goals.

In 2011, we maintained our motor vehicle safety program with a continued emphasis on driver training. Selected employees successfully completed a formal, one-day refresher driver training program, which includes two hours of classroom instruction and six hours of behind-the-wheel training. Other activities included improved tracking and reporting, and ensuring all PG&E vehicles have a 1-800 “Am I Driving Safely?” decal affixed to the back of the vehicle.

The following chart provides motor vehicle safety statistics for 2009 through 2011:



¹ Total Preventable Motor Vehicle Incidents is an internal PG&E metric counting motor vehicle incidents that could have been reasonably prevented by the PG&E driver.

² The Preventable Motor Vehicle Incident Rate measures how frequently motor vehicle incidents occur for every 1,000,000 miles driven.

Customers & Communities

Every day, PG&E provides energy across 70,000-square-miles of California. Our highest priority as we do so is the safety of our customers and the communities where they live and work. Our presence is fundamentally local, touching hometowns across the region by investing in jobs and energy infrastructure, helping homes and businesses save energy and collaborating with local community organizations through charitable grants and employee volunteers. Our work includes an enhanced engagement with local first responders, bringing an added degree of collaboration and emergency preparedness for both PG&E and these stakeholders. It also encompasses our long-standing support for underserved communities.

Our unwavering commitment to the city of San Bruno and its residents remains steadfast two years after the tragic pipeline accident there. PG&E continues to work with neighbors and city leaders to help restore and rebuild the community. Lessons learned from the accident have profoundly impacted PG&E, driving a complete review of our business and many ongoing changes ranging from our day-to-day practices to our overall culture. Our employees are working hard every day to build the nation's safest gas and electric system and to make sure a tragedy like that one never happens again.

Key Sustainability Indicators

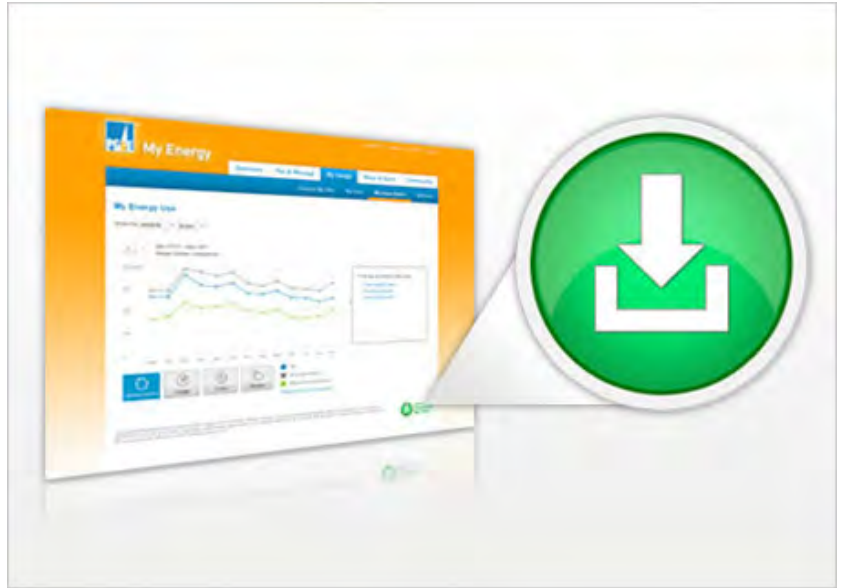
● = meets or exceeds target ● = below target ● = substantially below target

2011 Target	Progress	2011 Result	2012 Target
Community Investments			
Devote at least 1.1% of our pre-tax earnings from operations to charitable organizations	●	1.1%	1.1% of pre-tax earnings from operations
Employee Volunteerism			
5,775 employee volunteers	●	5,889	6,185 employee volunteers
28,875 employee volunteer hours at company-sponsored events	●	32,585	34,215 employee volunteer hours at company-sponsored events
Annual Employee Giving Campaign			
Achieve \$5 million in pledges/donations	●	\$5.3 million	\$5.6 million
Customer Energy Efficiency¹			
Achieve 100% of 2011 CPUC targets			Achieve 100% of 2012 CPUC targets
234 Megawatts (MW)	●	270 MW	251 MW
1,032 Gigawatt Hours (GWh)	●	1,519 GWh	1,114 GWh
16.2 million therms	●	33.2 million therms	17.1 million therms

¹ Data refers to annual energy savings or the first-year impacts associated with installed customer energy efficiency projects. Data (gross energy savings) is taken from Table 1 of the 2011 Energy Efficiency Annual Report, filed with the CPUC on May 1, 2012. The source for energy savings goals is CPUC Decision 09-09-047.

Engaging Customers through Smart Technology

At homes and businesses across our service area, PG&E works to help customers understand, actively manage and reduce their energy use. To support this goal, we are enabling new tools and technologies to spur innovation and provide customers with broader choices for rates, products and services. This includes providing SmartMeter™ technology to give customers increased control over their energy costs, while at the same time helping the environment by enabling wider adoption of electric vehicles and greater use of renewable energy.



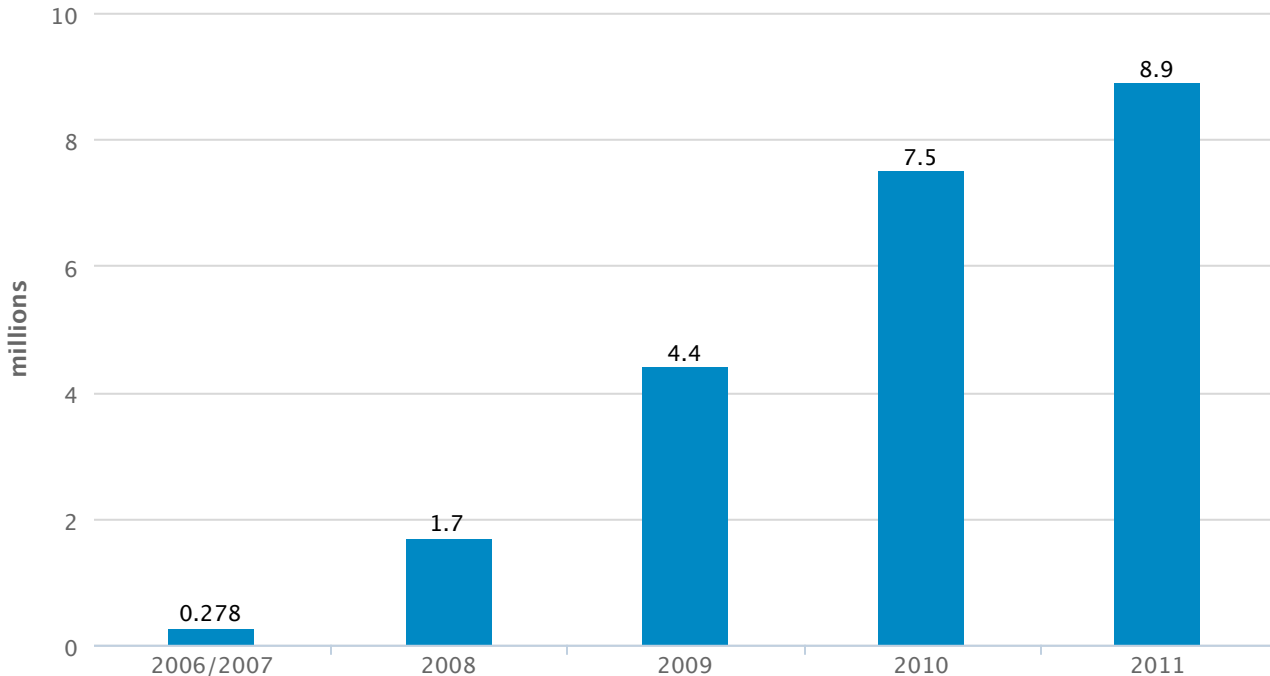
With the press of a “Green Button,” PG&E customers now have another tool to help save energy and money.

Laying the Foundation with SmartMeter™ Technology

PG&E’s [SmartMeter™ program](#) is a critical part of statewide efforts to better manage energy. It’s also helping to lay the foundation for a [Smart Grid](#) that will power California’s future.

The program represents North America’s largest upgrade of automated metering infrastructure. By the end of 2011, PG&E had replaced about 8.9 million analog gas and electric meters throughout our service area with SmartMeter™ technology. Many of the remaining meter installations are in less concentrated geographic areas, involve addressing less common meter types or require customized solutions.

SmartMeter™ Gas and Electric Meter Installations (cumulative)



PG&E's SmartMeter™ program provides powerful tools for our customers. The system's wireless communications capability enables us to provide more reliable service, making it possible to restore power faster after a disruption or reconnect a customer after a move to a new residence.

Customers also receive access to more frequent information about their energy use, which in turn enables them to better manage their energy consumption and costs. That's because SmartMeter™ technology "reads" energy usage throughout each day, as compared to traditional meters, which are manually read on a monthly basis.

Building on SmartMeter™ technology, we are beginning to offer customers new tools to help them learn more about their energy use, understand how their use affects their bills and take steps to save energy and money. These tools include pricing plans—such as PG&E's [Time-of-Use](#), [SmartRate™](#) and [Peak Day Pricing](#) plans—that are designed to help customers save money.

We also support individual choice for residential customers



With hands-on experiences at a digital kiosk, the SmartMeter™ [See Your Power Mobile Tour](#) has travelled around PG&E's service area to help customers learn about what SmartMeter™ technology enables. Customers play interactive games to better understand how much energy devices and appliances consume in their homes. Customers also can learn more about the SmartMeter™ program from on-site teams.

when it comes to the meter at their home. PG&E welcomed the CPUC’s decision to enable PG&E residential customers to “[opt out](#)” of the SmartMeter™ program if they choose to do so, and choose analog gas and electric meters instead of digital SmartMeters™ at any time and for any reason.

Innovating with the Press of a Green Button

PG&E [responded to a challenge from the White House](#) to design a standard format for customers to access energy usage data online. Now, with the press of a “[Green Button](#),” PG&E customers have another tool to help save energy and money.

The button allows customers to download their hourly energy usage information in an easy-to-use format. The standardized data format also encourages third-party developers to create innovative apps that maximize the full potential of this energy information.

In fact, PG&E joined with the U.S. Department of Energy and Itron Inc. in 2012 to sponsor a [\\$100,000 competition](#) to develop the best Web or mobile apps using the Green Button.

PG&E customers can also [share and compare their energy use data with friends on Facebook](#), using a new social energy application. The app, created by Opower in partnership with Facebook and the Natural Resources Defense Council, provides insight into individual energy use while fostering friendly competition among participants to conserve.

Empowering Customers with New Tools and Technologies

More than 2.4 million customers have used [My Energy](#), a new website we launched last year to enable customers to more effectively analyze their energy usage and develop plans to save energy and money.

Customers can review their detailed energy use and cost data so they can better connect the amount of energy they use with the price they pay. This is particularly important to our customers since California’s tiered rate structure encourages conservation by charging more per energy unit as the energy use increases. PG&E’s [Energy Alert](#) tool, based on SmartMeter™ data, enables customers to be proactively alerted by text message, e-mail or automated phone call as their electric use changes and they move from one tiered rate to another.

We enabled natural gas customers to participate in [Winter Gas Savings](#), a program that rewards customers for reducing usage during peak winter demand months. This included a new Facebook-enabled Winter Gas Savings Progress Tracker application that allowed customers to follow their progress toward earning a rebate online and adjust their energy consumption accordingly.

Customers can also view a rate analysis to determine if they are on the best rate for the way they use energy. The online energy survey is another tool that provides customers with energy saving tips based on their household profile and energy usage patterns.

We also maintain online education and enrollment support for [Peak Day Pricing](#) (the non-residential electric demand response initiative) and [SmartRate](#) and [SmartAC](#) pricing plans (residential demand response programs). Over time, PG&E may provide new features and tools to help customers see how and when they

use energy, to help customers reduce their overall energy usage.

We also continue to offer a variety of online tools, including a [Plug-in Electric Vehicle \(PEV\) Calculator](#) and a [Solar Calculator](#).



Through [Home Energy Reports](#), we are giving customers valuable information about their energy use, along with personalized tips on how they can save energy. The Home Energy Reports show customers how their energy use stacks up against approximately 100 similar, occupied homes in their area. Easy-to-understand charts and graphs show changes over time and across seasons. The reports also include custom tips to help customers manage energy use and costs by making quick fixes, smart purchases or long-term investments.

For large business customers, we are using an energy management analytics and planning tool that will enable us to work strategically with customers to recommend the best mix of our products and services to meet their needs. The tool enables PG&E to show customers how their facilities compare in energy use to one another and to established industry benchmarks. For our small and medium business customers, we also will be providing an online survey tool that identifies the largest end uses of energy and recommends energy saving opportunities.

Customer Energy Solutions

At PG&E, we are firmly committed to meeting our customers' energy needs with innovative tools, products and services. We remain focused on better understanding and responding to the different needs of our diverse customer base, with the overarching goal of providing tailored energy solutions that more effectively match customers with the right products and programs. We are also working to design and deliver these programs and services in a more integrated manner.



We offer a full portfolio of options to help our customers save energy and money, including some of the nation's leading programs and incentives for [energy efficiency](#), [demand response](#) and installation of [solar and other distributed resources](#). We have proposed a [Green Option](#) that would support 100 percent renewable energy for the customers who select it. We also continue to assist the growing number of customers who are purchasing plug-in electric vehicles.

Today, we are taking advantage of [new technologies](#) to help customers understand, actively manage and reduce their energy use. This includes giving customers individualized information so they can make more informed decisions to manage their own energy use and bills.

We are also reaching out to serve our customers where they live and work. Strengthening our local relationships will help customers see faster resolution of local concerns and earlier identification of issues that are important to them. For example, we've formed two pilot groups in Sonoma and Kern counties where cross-functional teams of employees meet regularly to discuss and resolve local issues. This approach is allowing us find new and better ways to use our resources to deliver results.

Learn more about our integrated customer energy solutions.

- [Customer Energy Efficiency](#)
- [Demand Response](#)
- [Solar and Other Distributed Generation](#)
- [Plug-In Electric Vehicles](#)

Employee Perspectives



Cait McClure, a senior project manager, talks about her commitment to the customers she serves.

To increase customer satisfaction, PG&E also actively uses customer research and insights to drive our decision-making and improve our customer service offerings. For example, following a system-wide “listening tour” where we heard candid feedback directly from customers, we have maintained this dialogue through customer advisory panels in different regions of our service area. The panels, which meet with PG&E executives quarterly, consist of both residential and small and medium business customers and serve an ongoing advisory role—providing insight into the customer experience and helping PG&E improve the way we engage with customers.

Customer Energy Efficiency

For more than 30 years, PG&E has championed energy efficiency, implementing a diverse array of programs, services and campaigns aimed at helping our customers save energy and money. In total, PG&E's programs have avoided the release of more than 180 million metric tons of carbon dioxide (CO₂) into the atmosphere, based on cumulative lifecycle gross energy savings.

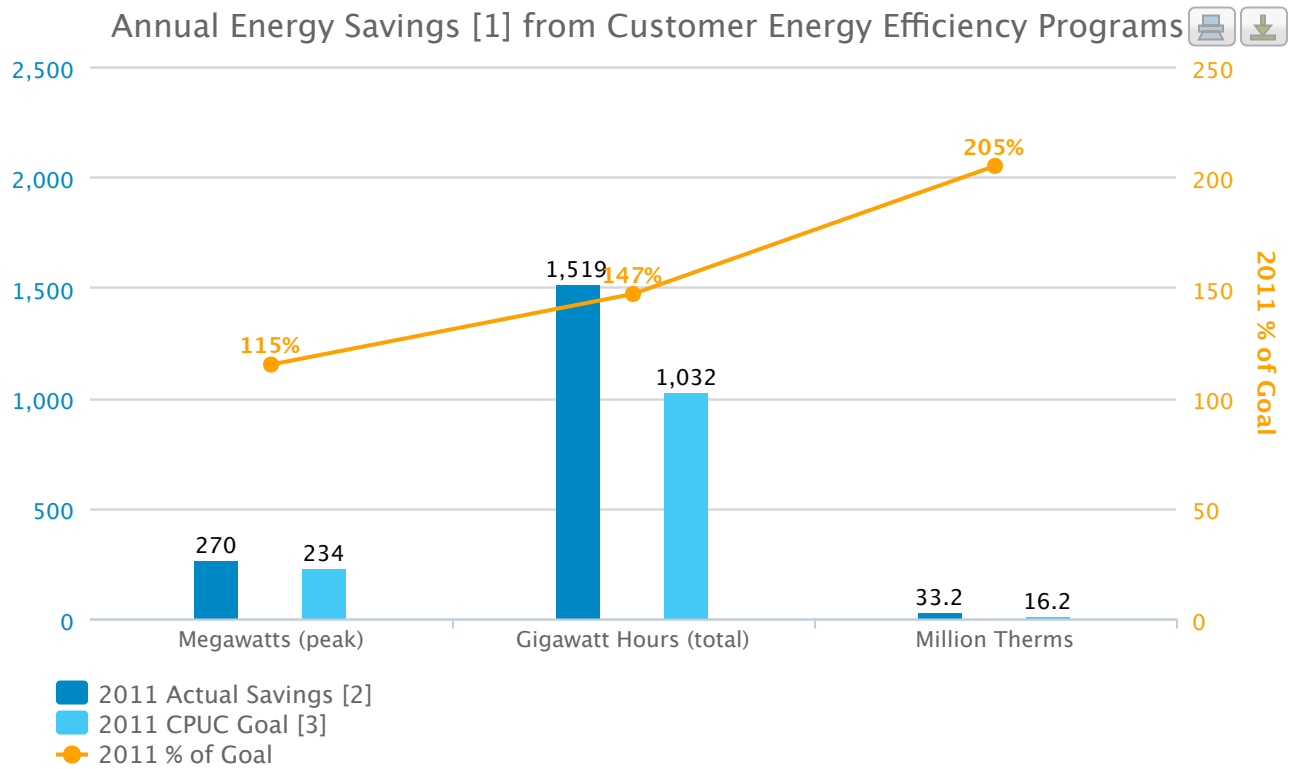
Our customers fund these programs through “public purpose program” charges embedded in gas and electric rates. This funding allows us to offer a broad portfolio of programs that includes a mix of [rebates and financial incentives](#), [training and education](#), support for commercializing [new and emerging technologies](#) and other activities, such as advocacy for stronger building codes and appliance standards.



Energy Efficiency Results

PG&E's gas and electric energy efficiency programs and goals are authorized by the CPUC on a three-year program cycle. For the 2010 to 2012 cycle, we have a budget of \$1.3 billion—the largest investment in energy efficiency by any U.S. utility. PG&E's savings goals for the three-year period are 3,110 GWh, 703 MW and 48.9 million therms.

PG&E exceeded the CPUC's energy savings goals for 2011, achieving savings of 1,519 GWh, 270 MW and 33.2 million therms. These results helped save customers more than \$262 million on their energy bills and avoided the emission of nearly 840,000 metric tons of CO₂ and 245 tons of nitrogen oxide (NO_x).



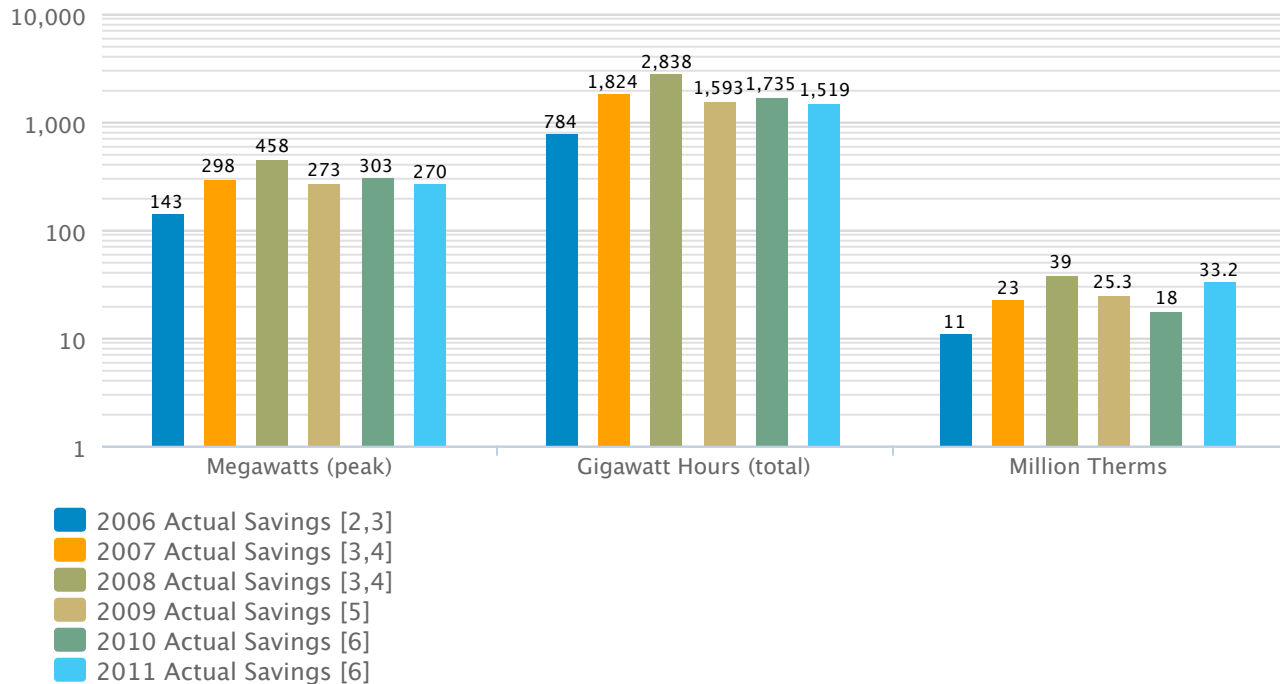
¹ Annual energy savings refer to the first-year impacts associated with installed customer energy efficiency projects.

² Data (gross energy savings) is taken from Table 1 of the 2011 Energy Efficiency Annual Report, filed with the CPUC on May 1, 2012.

³ Source is CPUC Decision 09-09-047.

Annual Energy Savings^[1] from Customer Energy Efficiency Programs

2006–2011



¹ Annual energy savings refer to the first-year impacts associated with installed customer energy efficiency projects.

² Data (net energy savings) is updated from Tables 1 and 2 of the Energy Efficiency Program Portfolio Annual Report for 2006, filed with the CPUC on November 15, 2007.

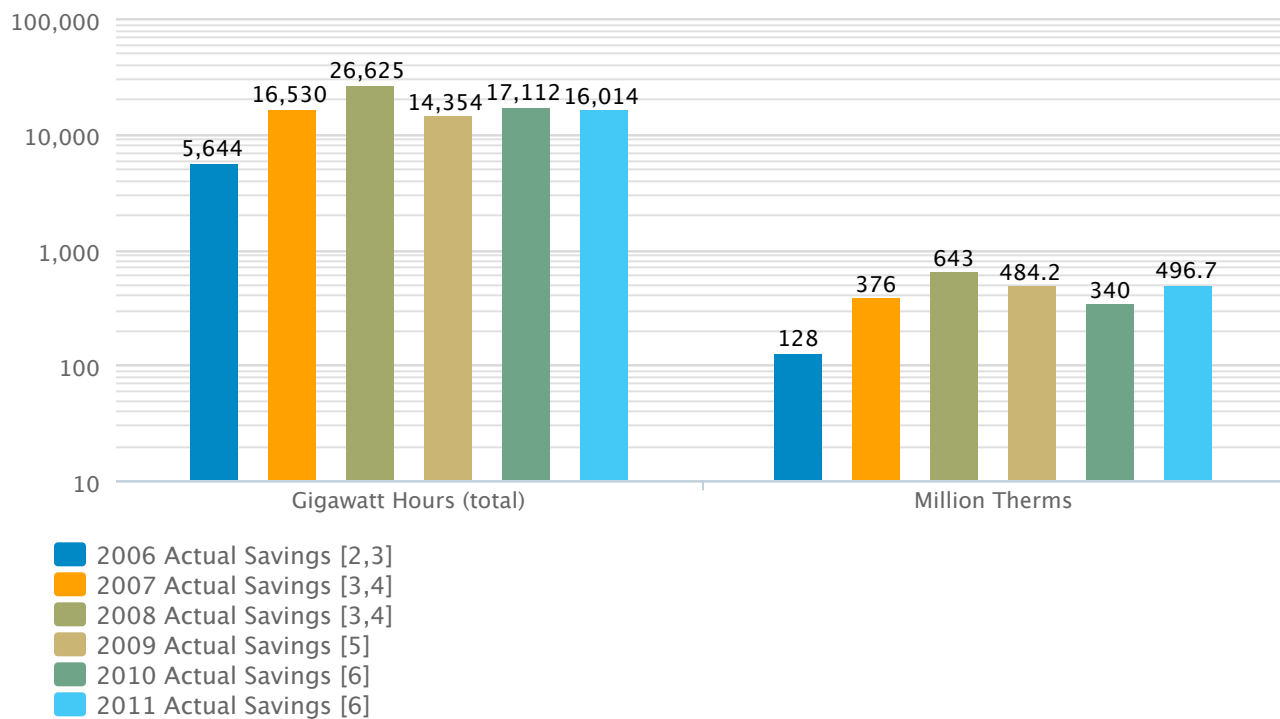
³ Net actual energy savings, as measured against net energy savings goals for 2006 through 2008 established in CPUC Decision 04-09-060.

⁴ Data (net energy savings) is updated from Tables 1 and 2 of the Energy Efficiency Program Portfolio Annual Report for 2007 and 2008, both filed with the CPUC on May 1, 2009.

⁵ Data (gross energy savings) is derived from the 2009 4th Quarter Report to the CPUC, dated March 26, 2010. The gross energy savings are measured against gross energy savings goals for 2009 through 2012 established in CPUC Decision 09-09-047. Prior to 2009, energy savings were measured in “net” energy savings.

⁶ Data (gross energy savings) is taken from Table 1 of the 2011 Energy Efficiency Annual Report, filed with the CPUC on May 1, 2012.

Lifecycle Energy Savings [1] from Customer Energy Efficiency Programs



¹ Lifecycle energy savings refer to the estimated energy efficiency savings over the expected lifetime of the installed customer energy efficiency projects.

² Data (net energy savings) is updated from Tables 1 and 2 of the Energy Efficiency Program Portfolio Annual Report for 2006, filed with the CPUC on November 15, 2007.

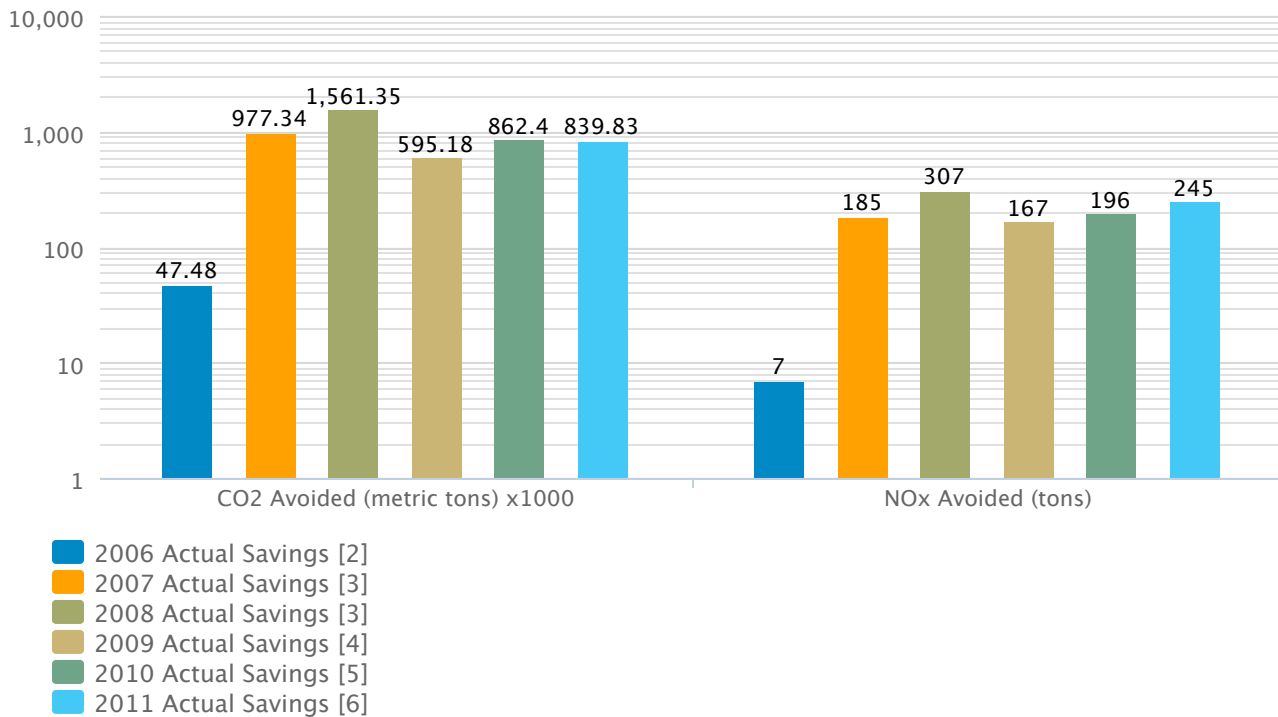
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⁶ Data (gross energy savings) is taken from Table 1 of the 2011 Energy Efficiency Annual Report, filed with the CPUC on May 1, 2012.

Annual Avoided Emissions [1] from Customer Energy Efficiency Program



¹ Annual avoided emissions refer to the first-year impacts associated with installed customer energy efficiency projects. The CO₂ avoided emissions above are reported in metric tons; the Energy Efficiency Annual Report reports CO₂ in short tons.

² Data (net energy savings) is updated from Tables 1 and 2 of the Energy Efficiency Program Portfolio Annual Report for 2006, filed with the CPUC on November 15, 2007.

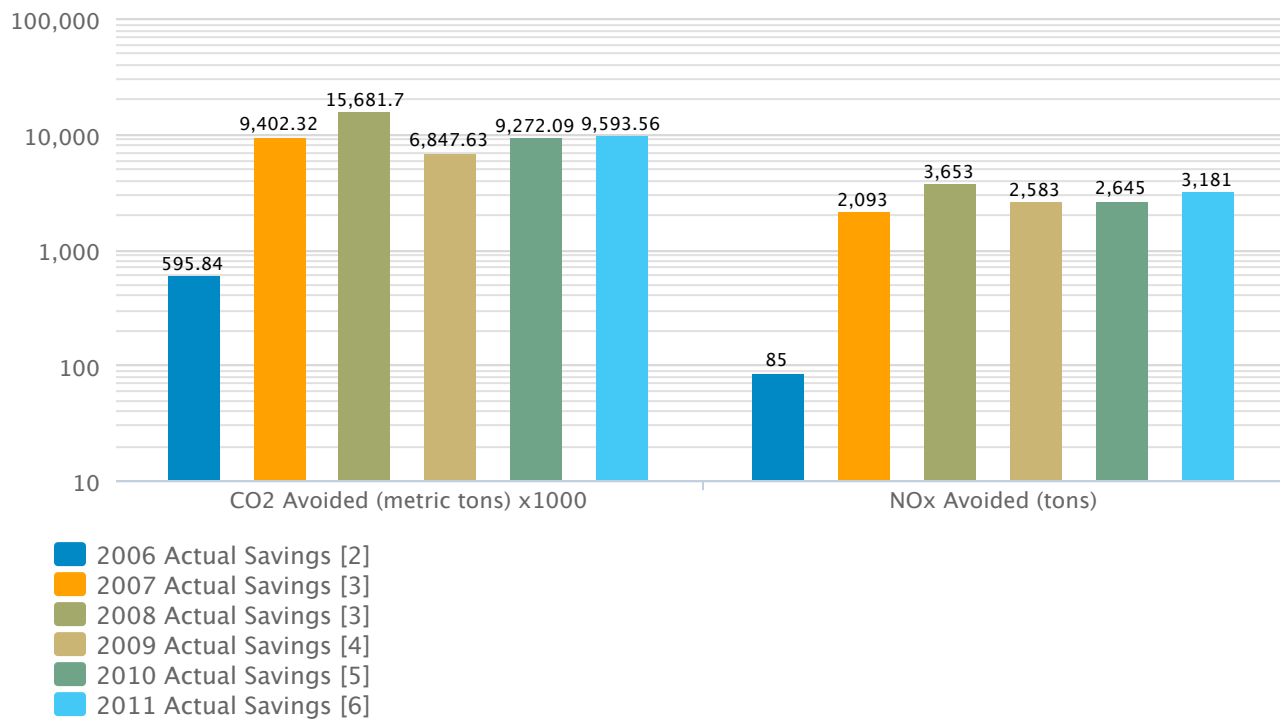
³ Data (net energy savings) is updated from Tables 1 and 2 of the Energy Efficiency Program Portfolio Annual Report for 2007 and 2008, both filed with the CPUC on May 1, 2009.

⁴ Data (gross energy savings) is derived from the 2009 4th Quarter Report to the CPUC, dated March 26, 2010. The gross energy savings are measured against gross energy savings goals for 2009 through 2012 established in CPUC Decision 09-09-047. Prior to 2009, energy savings were measured in "net" energy savings.

⁵ The 2010 annual tons of CO₂ and NO_x avoided were updated based on the updated gross energy savings from Table 2 of the 2011 Energy Efficiency Annual Report, filed with the CPUC on May 1, 2012.

⁶ The 2011 annual tons of CO₂ and NO_x avoided are taken from Table 2 of the 2011 Energy Efficiency Annual Report, filed with the CPUC on May 1, 2012.

Lifecycle Avoided Emissions [1] from Customer Energy Efficiency Program



¹ Lifecycle avoided emissions refer to the estimated avoided emissions over the expected lifetime of the installed customer energy efficiency projects. The CO₂ avoided emissions above are reported in metric tons; the Energy Efficiency Annual Report reports CO₂ in short tons.

² Data (net energy savings) is updated from Tables 1 and 2 of the Energy Efficiency Program Portfolio Annual Report for 2006, filed with the CPUC on November 15, 2007.

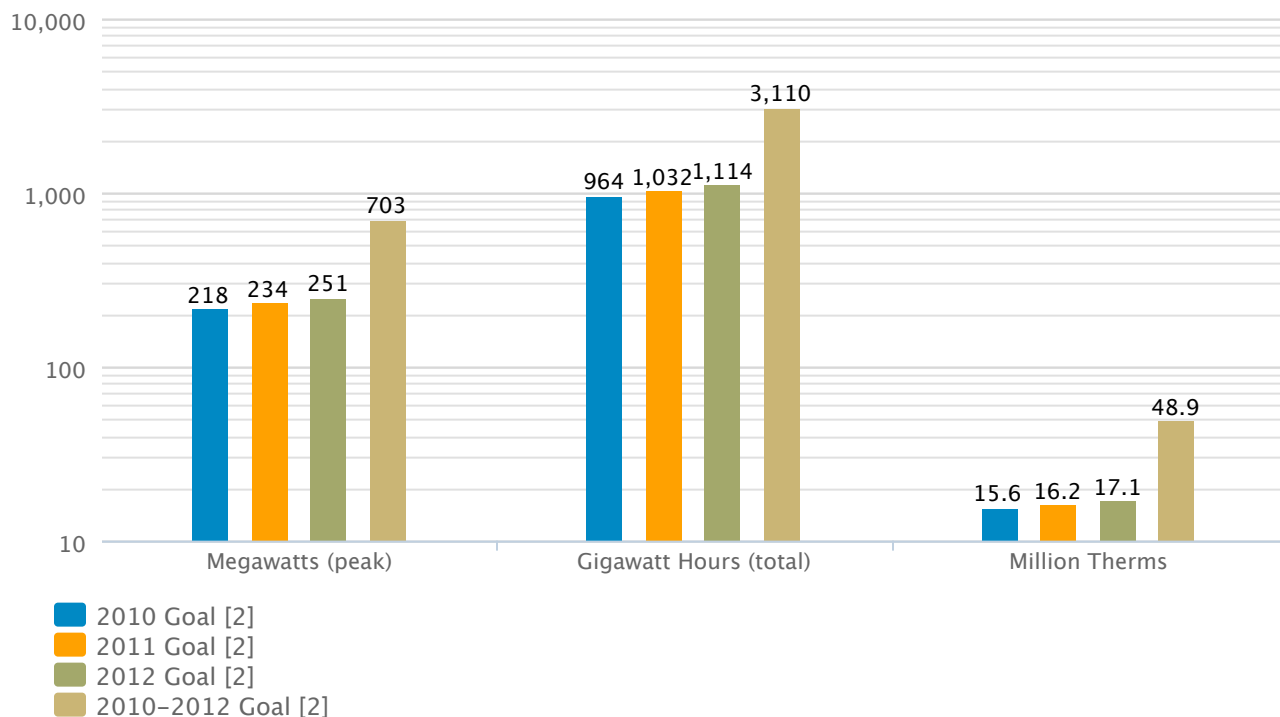
³ Data (net energy savings) is updated from Tables 1 and 2 of the Energy Efficiency Program Portfolio Annual Report for 2007 and 2008, both filed with the CPUC on May 1, 2009.

⁴ Data (gross energy savings) is derived from the 2009 4th Quarter Report to the CPUC, dated March 26, 2010. The gross energy savings are measured against gross energy savings goals for 2009 through 2012 established in CPUC Decision 09-09-047. Prior to 2009, energy savings were measured in "net" energy savings.

⁵ The 2010 lifecycle tons of CO₂ and NO_x avoided were updated based on the updated gross lifecycle energy savings from Table 2 of the 2011 Energy Efficiency Annual Report, filed with the CPUC on May 1, 2012.

⁶ The 2011 lifecycle tons of CO₂ and NO_x avoided are taken from Table 2 of the 2011 Energy Efficiency Annual Report, filed with the CPUC on May 1, 2012.

Three Year Energy Savings [1] Goals from Customer Energy Efficiency Prog



¹ Annual energy savings refer to the first-year impacts associated with installed customer energy efficiency projects.

² CPUC Decision 09-09-047 established gross energy savings goals for 2009 through 2012.

A Broad Portfolio of Programs

At PG&E, we put our customers at the center of how we design our energy efficiency programs. In fact, we maintain a portfolio of 130 energy efficiency programs, all of which come together to serve the unique needs of our different customers.

Reflecting the diversity of our customer base, our programs cover a wide variety of market segments: agriculture and food processing, high tech, retail, schools, small and medium business, and residential customers, among others. A group of seasoned business customer account representatives works directly with large commercial and industrial customers. In 2011, as part of an enhanced effort to reach small and medium businesses, we launched a pilot outreach campaign in Kern and Sonoma counties to explore opportunities to better deliver energy efficiency programs and products to this segment of customers. We also serve customers through partnerships with state and local governments and through [third-party energy efficiency specialists](#).

As we carry out these programs, we use different

Energy Upgrade California is a new, statewide program that offers



incentives to homeowners who complete comprehensive energy-saving home improvements on a single-family residence. These incentive packages encourage customers to take a “whole house” approach by combining several related improvements at once to increase a home’s overall energy efficiency and achieve greater savings.

As part of this statewide effort, PG&E launched its Whole House Program in 2010. The effort included extensive

approaches to reach the maximum number of customers in the most cost-effective way:

- Directly encouraging customers to purchase energy efficient products through [rebates and incentives](#). For example, we give money back to customers who purchase energy-efficient home appliances such as refrigerators, clothes washers, air conditioners and water heaters.
- Working with retailers, distributors, vendors, [trade professionals](#) and contractors to increase the accessibility of high efficiency products with consumers. This includes providing incentives to encourage increased stocking, promotion and sales of high-efficiency lighting products and TVs.
- Partnering with manufacturers and distributors to increase the market share of higher efficiency products. This includes offering incentives to distributors who sell qualifying high-efficiency HVAC equipment.

outreach to homeowners and outreach to recruit and train contractors, leveraging our [Energy Training Center in Stockton](#) and industry partners. Nearly 1,000 homes had energy efficiency measures installed throughout our service area last year.

Our team of experts also provides technical assistance to help the California Energy Commission (CEC) set new efficiency requirements for [buildings](#) and [appliances](#).

For example, PG&E actively supported an [energy efficiency standard for battery charger systems](#) that was adopted by the CEC in early 2012. There are an estimated 170 million chargers in California households, an average of 11 battery chargers per household. Once fully implemented, California customers will save more than \$300 million annually and eliminate one million metric tons of carbon emissions.

Workforce Education and Training

PG&E's Pacific Energy Center [celebrated its 20th anniversary](#) last year—a major milestone on its quest to help architects, engineers, developers and building operators design and maintain energy-efficient commercial buildings.

The center hosts courses on energy efficiency, demand response and renewable energy, some at the center and others throughout PG&E's service area. Since 2006, the center has provided more than 920 unique courses, 950 technical consultations and 600 outreach events. Last year alone, the center hosted about 8,000 students.

One of the center's most popular features is its Tool Lending Library. Anyone working on short-term energy-efficiency projects can borrow building measurement equipment at no cost—everything from humidity probes to infrared cameras that calculate an object's surface temperature. The center also has a library and a resource specialist to help building developers research energy efficiency-related topics.

The center is one of three PG&E centers devoted to promoting energy-efficient buildings. PG&E also has a center in [Stockton](#) for residential buildings and one in [San Ramon](#) that caters to restaurants and buildings for the food industry. PG&E's Energy Training Center in Stockton is the longest continuously operating

weatherization training center in the nation, supporting the state's efforts since 1978. Over time, the center has trained more than 91,000 participants who, in turn, have performed energy audits, weatherization or home performance services for more than two million Californians.

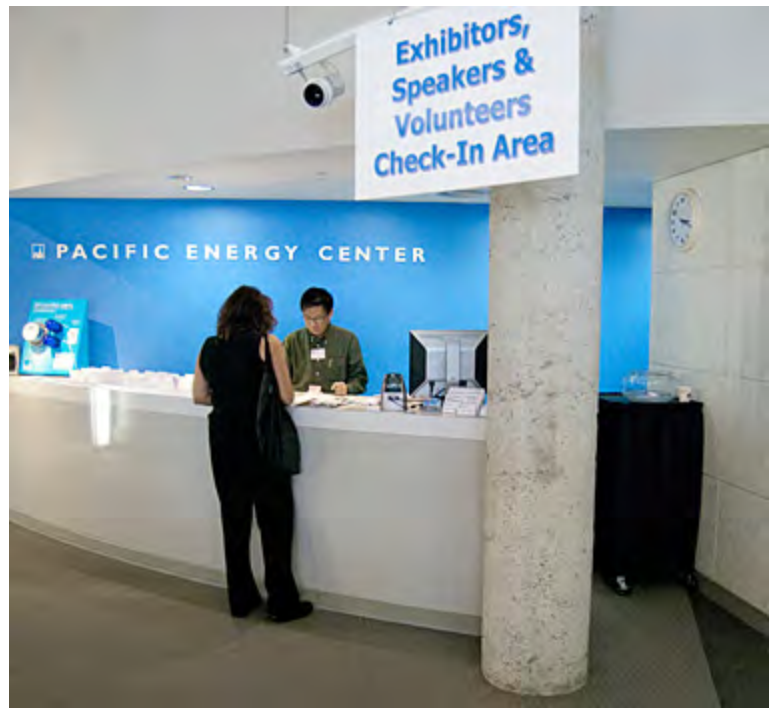


Photo: Joseph Dannels

Helping Cities Reduce Energy with LED Street Lamps

An increasing number of cities are taking advantage of a PG&E program to replace traditional street lamps with energy-saving LED models. Compared with traditional street lights, LEDs use about 50 percent less electricity and last up to five times longer. Energy savings help cities reduce their monthly utility bills, allowing them to invest in other city projects.



Before (left): The orange glow of high-pressure sodium vapor lights in Chico.

After (right): New LED lights give a more natural, daylight-feel to the same street.

PG&E launched its LED Street Light Turnkey program in late 2009. Since then, more than 65 cities from Arcata, near the California-Oregon border, to the San Joaquin Valley have swapped street lamps as part of this program.

In 2011, PG&E contracted and installed streetlights with more than 40 cities to convert more than 14,800 streetlights to LED. To date, these cities have achieved more than \$760,000 in first year energy cost savings.

[Learn more about the streetlight program and incentives.](#)

Recognizing Zero Net Energy Building Designs

Requiring that all new buildings be zero net energy (ZNE) is a state policy goal adopted by the California Energy Commission, California Air Resources Board, California Public Utilities Commission and the Governor's office. New residential buildings must be ZNE by 2020, and commercial buildings must be ZNE by 2030. Achieving this goal will require an intense focus on reducing energy consumption through state-of-the-art design and technology, with grid-connected renewable energy to minimize each building's residual carbon footprint.

As a step toward this goal, a PG&E-sponsored [architectural design competition](#) demonstrated the potential for ZNE residential construction. PG&E joined the San Francisco chapter of American Institute of Architects in announcing the winners of their first Architecture at Zero competition for ZNE building designs. The competing architects offered diverse concepts for an urban infill site in the city of Emeryville, with the design goal of producing as much clean energy as it would consume.

Helping Federal Customers Meet Energy Reduction Mandates

In an effort to help federal agencies meet federally mandated energy efficiency goals, PG&E manages energy efficiency turn-key projects for our federal customers through our Utility Energy Services Contract program. The program enables federal customers to partner with PG&E's team of experts to meet their energy efficiency and renewable energy goals.

PG&E is currently completing a project for the NASA Ames Research Center—a site that plays a critical role in virtually all NASA missions in support of America's space and aeronautics programs. The project encompasses more than one hundred buildings at the Center and covers more than two and half million square feet.

The array of energy conservation measures at the site will save the Center 9 GWh, 1.3 million therms and more than 15 million gallons of water annually. This equates to an 11 percent reduction in annual energy intensity (BTU per square foot) and a 25 percent reduction in annual water consumption. The Center will also save more than \$1.5 million annually in water and energy costs.

Supporting Innovative Local Projects

Through our [Innovator Pilots Program](#), we are helping communities test out new ways of achieving deeper energy savings. The program provides competitive funding to local, regional and sub-regional governments to support innovative and creative approaches to energy efficiency and greenhouse gas emission reductions. Projects were selected based on their likelihood of being scalable and replicable throughout our service area.

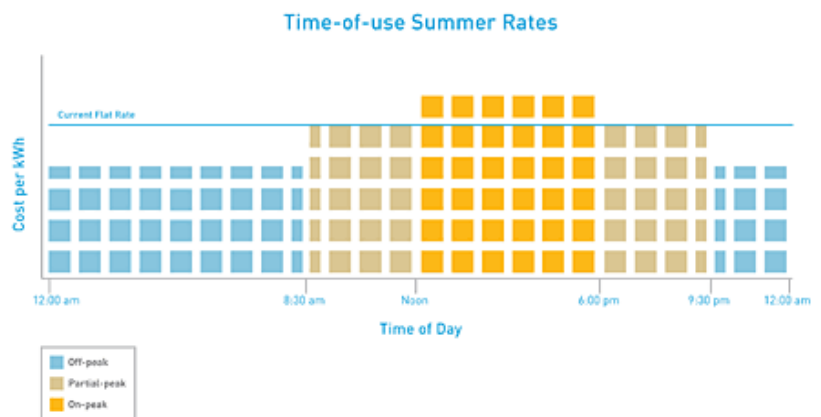
We selected eight projects in 2011.

Local Government	Project
City of San Francisco	Study opportunities for how newer, more efficient refrigeration equipment can provide a cost-effective option for small and medium businesses.
Mendocino County	Develop a program to bring energy efficiency to hard-to-reach communities by embedding practices into public housing authority policies and procedures and internal operations.
Humboldt County	Test the Redwood Neighborhood Energy Challenge concept, which will use community-based social marketing to engage neighborhoods and individuals to reduce a local school's energy consumption.
Santa Clara County	Develop a program to create benchmarking standards for correctional facilities, which are high consumers of energy and can pose unique challenges for implementing energy efficiency.
Cities of Albany, Benicia, El Cerrito, Moraga, Orinda, Piedmont and San Pablo	Increase energy management activity in small local governments by developing a partnership of small cities backed by a technical support team.
San Luis Obispo County	Test the concept of group purchasing of energy efficiency (pooling the buying power of more than one facility) for small and medium businesses, saving time and resources while reducing energy costs.
Napa County	Develop, test and evaluate strategies to educate building maintenance staff and occupants about systems, procedures and day-to-day behaviors that will improve energy efficiency, assure comfort, reduce operating costs and reduce greenhouse gas emissions.
Alameda County	Develop a tool that, by making the energy performance of housing more transparent, helps buyers and renters take energy efficiency into account when making housing decisions and encourages building owners to improve facility energy efficiency.

Demand Response

Occasional storms and heat waves, as well as periodic power plant or transmission line repairs and maintenance, have the potential to affect California's supply and demand for electricity. When demand is high and supply is short—typically during hot summer days—it can increase the risk of power interruptions for homes and businesses.

PG&E's [demand response](#) programs provide an effective way to address this challenge by rewarding customers who reduce or shift their energy use on days when demand for energy is at its highest. These incentives differ from energy efficiency programs, which result in permanent reductions in energy usage.



With Time-of-Use rates, the cost of electricity varies based on time, day of the week and season. Shifting even small amounts of energy use to off-peak periods—when rates are lower—can save customers money.

Program Results

By participating in demand response programs, customers earn incentives while giving back and helping to enhance power reliability for all Californians. These programs also enable PG&E to take a more fiscally and environmentally responsible approach by avoiding building and maintaining additional power plants that would only be needed for relatively few hours during the year.

PG&E's demand response programs range from [SmartAC™](#), which cycles residential air conditioning units on and off, to fully [automated programs](#) that reduce energy use through an electronic signal, to emergency programs where large industrial customers voluntarily reduce their electricity demand in less than an hour upon request.

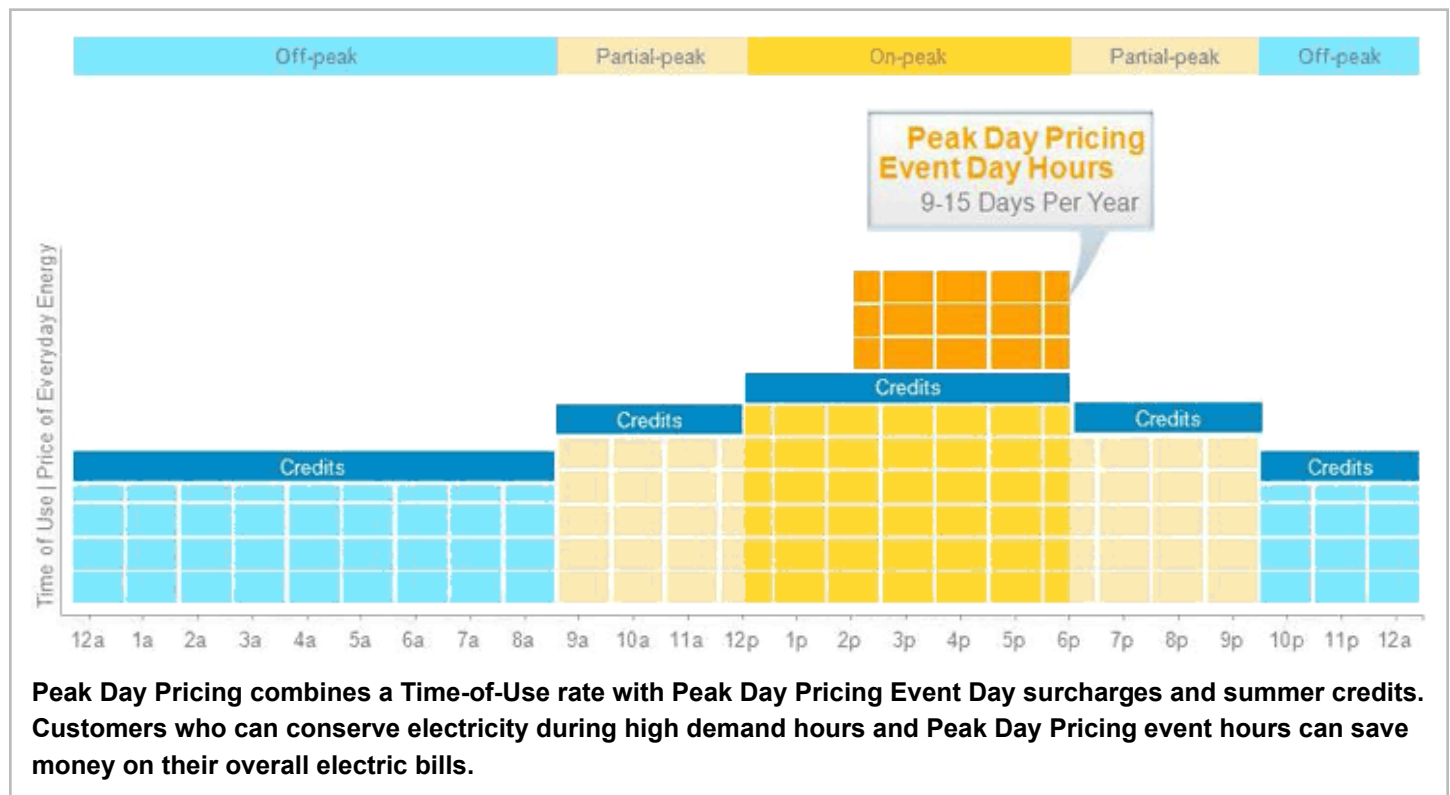
Overall, customer participation in PG&E's demand response programs avoided the purchase of 575 MW of power generation capacity in 2011.

Transitioning to Time-Varying Pricing

California businesses are moving to a new electric rate structure called [Time-Varying Pricing](#), as part of a statewide energy plan being implemented at the direction of the California Public Utilities Commission. Time Varying Pricing plans are supported by SmartMeter™ technology and are designed to help better align the price for energy with the cost of energy at the time it is produced. With Time Varying Pricing, when a customer uses energy is as important as how much energy is used. This "time" component provides customers with even greater control over their energy costs.

Time-of-Use is a Time-Varying Pricing program offered by PG&E in which rates are higher during weekday afternoons when electric demand is at its peak (typically May through October from noon to 6 pm). In return, customers will pay lower rates at all other times.

Peak Day Pricing is a Time-Varying Pricing program for non-residential customers, which uses Time-of-Use as its foundation. However, with Peak Day Pricing, two components are added to the rate structure. The first is a **Peak Day Pricing Event Day** surcharge for energy consumed during extreme peak hours of 2 to 6 pm, 9 to 15 days each year. This is an added incentive for customers to further conserve electricity during critical peak hours. In exchange, customers are rewarded with the second component—additional credits for all other electric use in the summer months between May and October.



Large commercial and industrial customers began transitioning to opt-out Peak Day Pricing in 2010, followed by large agricultural customers in 2011. Eligible small and medium business customers will begin transitioning to mandatory Time-of-Use rates in November of 2012, followed by eligible small and medium agricultural customers in March of 2013. Eligible small and medium business customers will then transition to opt-out Peak Day Pricing starting in November 2014.

PG&E provides online tools, programs and services to help businesses succeed with Time-Varying Pricing. Customers can [log into our website](#) to see a custom rate comparison and learn more about the pricing options available to them. Also, via the website, customers can take advantage of energy efficiency programs and rebates on equipment and lighting, get a personalized energy assessment and use online account tools and information to help manage their energy use and bills.

Residential customers can voluntarily sign up for the [SmartRate™ Summer Pricing Plan](#), an option enabled

by SmartMeter™ technology that helps customers better control and reduce energy costs. Similar to Peak Day Pricing for non-residential customers, the SmartRate™ Summer Pricing Plan helps residential customers save money by conserving power during up to 15 SmartDays™ each summer, when energy may be in short supply.

Innovating with Automated Demand Response

PG&E's [Automated Demand Response](#) program, or "AutoDR," enables customers to automatically reduce their energy use when they receive an electronic signal from PG&E.

To get started, PG&E and customers work together to identify specific ways—such as turning off lights or air conditioners—to reduce or even eliminate customer electricity use during peak demand periods. After the customer defines their energy reduction strategies, they receive funds to automate their equipment or energy management and control systems. Then, during a demand response event, PG&E sends a signal via the internet to the customer's AutoDR-enabled equipment or energy control system, which initiates a series of customer-defined, pre-programmed and pre-authorized demand reduction strategies. These events usually occur during hot, summer weekdays.

Since 2005, PG&E has successfully demonstrated the program with a small group of customers. PG&E has requested regulatory approval to support broader customer adoption of this promising technology.

As a key milestone, in 2011, the National Institute of Standards and Technology ratified the Open Automated Demand Response 2.0 (OpenADR) standard, which provides a common language for the energy industry to use for sending AutoDR signals. PG&E led the development of the OpenADR standard, drawing on our years of work with the Lawrence Berkeley National Laboratory. Our commitment will continue as a board member of the [Open ADR Alliance](#), a group formed to accelerate the development, adoption and compliance of OpenADR standards throughout the energy industry.

PG&E continues to collaborate on other [Smart Grid](#) standards, such as Smart Energy Profile 2.0, to reduce the cost of demand-response-enabling technologies and provide incentives to customers to upgrade their demand response capabilities.

On the Horizon

Looking forward, PG&E will continue to help realize the demand response potential of California by offering new programs and technologies that enable customers to better control their energy use and reduce their environmental footprint.

As an example, we will continue to transform our programs to be more useful to the electricity system operators. We bid one of our demand response programs into the electricity market in 2011 and will continue to do so in 2012. This has allowed PG&E's demand response programs to provide additional value to customers by potentially lowering wholesale electricity prices.

We also will continue to focus on better integrating how we develop and market our demand response programs, moving toward assessing a customer's overall energy demand and finding the best combination of energy efficiency, demand response and other programs to meet their needs.

Solar and Other Distributed Generation

PG&E has helped our customers connect more than 60,000 solar photovoltaic (PV) systems to the electric grid—more systems than any other utility in the country. In fact, this represents about 30 percent of the PV systems installed throughout the United States. PG&E also plays an important role in assisting customers who choose to integrate other alternative generation sources at their homes and businesses.

With incentives for rooftop solar, solar water heating, fuel cells, wind and other advanced technologies, PG&E provides a full suite of customer distributed generation programs. And we will continue to work with policymakers and other stakeholders to chart a course to a clean energy future—one that gives customers clean energy choices, helps ensure the reliability of the grid and is affordable for all customers.



California Solar Initiative

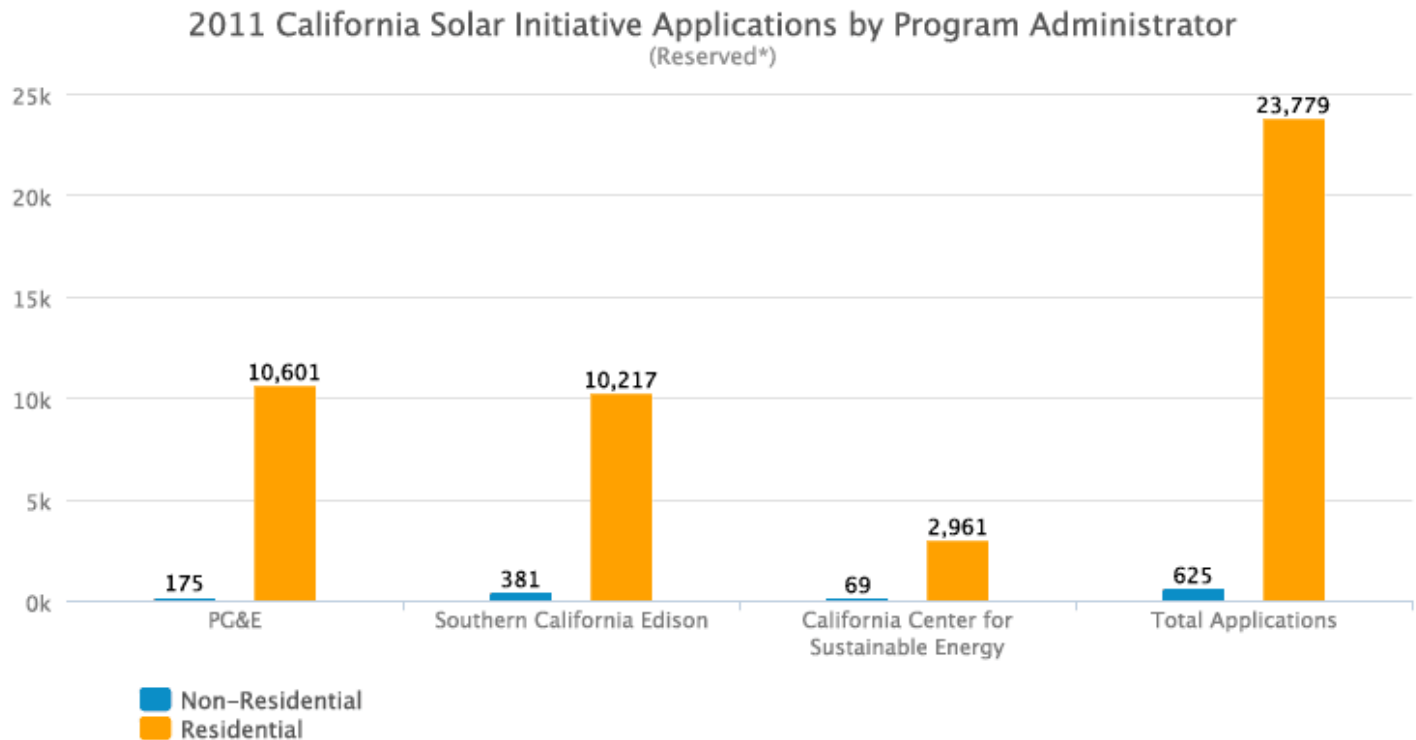
The statewide goal for the [California Solar Initiative \(CSI\)](#) is to install 1,940 MW of new, customer-installed solar capacity by 2017.

Through CSI, PG&E is helping to make solar more affordable for residential and commercial customers via incentives funded by a distribution charge in customer rates. The program includes incentives for homes and businesses, including special programs for [single- and multi-family affordable housing](#) and [new energy efficient homes that install solar](#). The incentive amounts were designed to decline over time to encourage early adopters to participate and stimulate the solar marketplace—ultimately, making PV more cost-effective and affordable for all customers.

Additionally, PG&E's [Net Energy Metering \(NEM\)](#) program gives customers the ability to reduce their electricity bills with energy their solar generating system exports to the grid. PG&E also compensates customers for energy their renewable system generates in excess of their consumption over a twelve month period.

In 2011, we interconnected more than 13,600 customer-owned solar PV systems to the electric grid. Last year, PG&E also paid and reserved \$137 million in CSI rebates for 70 MW of both installed and currently active residential and commercial solar installations. Our customers accounted for nearly half of the total customer applications to reserve CSI funding for residential and commercial solar projects.

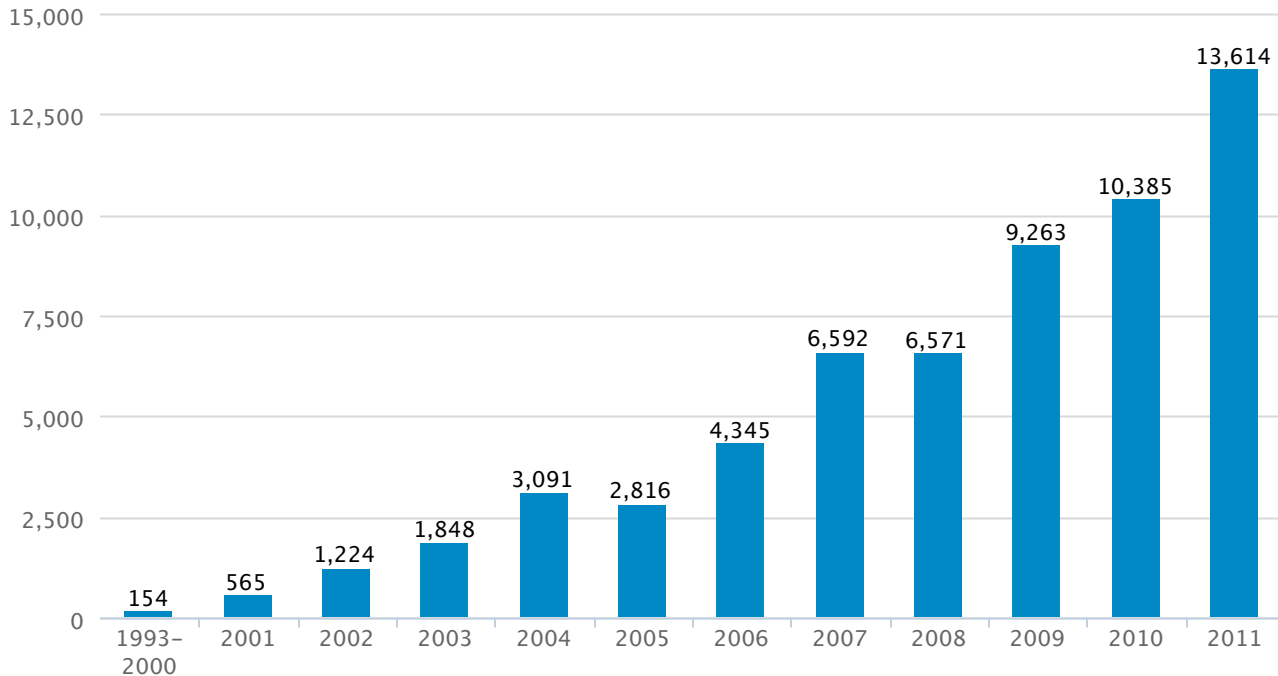
Through the program, PG&E has the potential to provide more than \$760 million in solar rebates to our customers over a 10-year period. Through 2011, PG&E awarded approximately \$600 million for 400 MW of installed solar PV systems. We continue to work collaboratively with regulators, the other program administrators and key industry stakeholders on changes to the CSI program to help ensure the goals of the program are met.



* Refers to customer applications to reserve California Solar Initiative funding for residential and commercial solar projects.

Annual PG&E Interconnected Customer Solar Systems

Total Solar Interconnections = Approximately 60,300



Other Self-Generation Incentives

PG&E's [Self-Generation Incentive Program \(SGIP\)](#) provides incentives for other advanced generating technologies, such as fuel cells, wind, combustion turbines and advanced energy storage. In 2011, PG&E worked with the CPUC, the other program administrators and industry stakeholders to implement California Senate Bill 412 (SB 412), which allowed SGIP to include additional technologies beyond fuel cells and wind.

Over a three-month application period in 2011, we received nearly 100 new applications for about 30 MW and \$63 million in rebates. SGIP will operate until 2016 and PG&E will work to help ensure the technologies meet the goals of the program—to reduce peak load and greenhouse gas emissions for participating customers.

Solar Water Heating Program

PG&E's [solar water heating program](#) provides rebates to residential, multifamily and commercial customers who install eligible solar water heating systems in their home or business. Last year, PG&E allocated more than \$1.2 million in incentives, helping customers avoid the need for electricity or natural gas to heat water.

The program will run through December 2017 or until the budget of \$300 million is exhausted, whichever comes first. As with the existing CSI program, rebate amounts will decline over time to provide an incentive for early adopters to participate.

Offering Education and Training

PG&E remains focused on raising awareness of solar power and other generating technologies among our customers. Achievements last year included:

- Offering 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 145 solar classes last year with nearly 3,000 people in attendance.
- Providing customers with a [Solar Analysis tool](#) to estimate the benefits of installing solar and a [Solar Savings Kit](#) with all the information needed to go solar.
- Partnering with Diablo Valley College to offer an innovative, hands-on solar water heating course to candidates with valid contractor licenses. Many participants have since begun to offer solar water heating services.

Earning Recognition

The Solar Electric Power Association (SEPA) named Pacific Gas and Electric Company one of six winners of its 2011 SEPA Solar Business Achievement Awards, given to utilities and partners that increase the percentage of the nation's energy mix generated by solar energy. Pacific Gas and Electric Company won the award for utility community outreach and public awareness.

For the third straight year, [Pacific Gas and Electric Company also ranked first](#) on SEPA's list of utilities with the most solar MW added to the grid, and ranked fifth for adding the most solar on a watts-per-customer-served basis. The rankings were based on 2010 data.

On the Horizon for 2012

Customer-side solar PV installations continue to show strong progress, in part due to new financing structures and significant reductions in system costs. PG&E will continue to partner with customers who wish to install solar projects on their side of the meter and will focus on providing a high level of service.



Pacific Gas and Electric Company President Chris Johns **presented Medtronic Inc. with a \$241,000 check** for the company's solar installation. The medical device company added 1,344 solar panels to its Santa Rosa plant and earned the incentive through the California Solar Initiative.

Officials from the City of Bakersfield, the U.S. Department of Energy and PG&E welcomed an **upgraded wastewater treatment plant** featuring a 1 MW PV solar system upgrade. The project, which will allow the wastewater treatment plant to get about one-third of its power from the sun, received \$3 million in federal stimulus funds. In addition, PG&E expects to provide up to \$2.7 million to the City in rebates over the next five years.

In addition, the SGIP and solar water heating programs will create more choices for customers looking for the most cost-effective way to generate their own power and save on energy costs.

When offering these programs, PG&E believes it's important to carefully manage the goals of safety, reliability and affordability when making clean energy choices. PG&E is committed to working with agencies and stakeholders to bring changes in rate design and net energy metering to balance the interests of participating and non-participating customers.

PG&E also continues to encourage customers to invest in more cost-effective energy efficiency measures that complement distributed generation. This includes requiring customers to conduct an energy efficiency audit before applying for CSI incentive funding. As technologies become more advanced, we are exploring how solar and other distributed generation can integrate into the Smart Grid and provide additional benefits to our customers.

Plug-In Electric Vehicles

Many of our customers are adopting a greener driving alternative by purchasing a [plug-in electric vehicle \(PEV\)](#). In fact, our service area is among the initial target markets for these vehicles, making our customers among the first to purchase them. We continue to work with our customers to facilitate a smooth transition to this next generation of vehicles.



Engaging With Customers

PG&E is focused on [working with customers with PEVs](#), including communicating the benefits of the vehicles in local workshops, as well as discussing key issues such as the best time to charge PEVs.

We are helping customers manage the costs of owning PEVs. We offer customers [two electric vehicle rates](#) to manage their monthly energy bill and charging costs; in 2012, we proposed a new, simpler rate plan for electric vehicle charging that is pending approval by the California Public Utilities Commission.

Our [online calculator](#) helps customers understand the potential costs and savings of PEV ownership. Customers can enter their choice of vehicle, predicted average monthly usage and charging schedule and other information, and then see the projected electricity costs and gasoline savings. PG&E customers who are planning to buy an electric vehicle can also [contact PG&E](#) to learn about options for getting their residence plug-in ready and to start their application for service.

We are also working with automakers during the PEV purchase process to help ensure a smooth experience when customers return home with a PEV.

Exploring “Smart Charging” Technologies

For most PEV owners, a Level 1 charger using a 120-volt circuit—like those found in most homes—is sufficient. A Level 2 charger using a 240-volt circuit can cut charging time nearly in half but requires wiring upgrades. Depending on what a customer chooses, it may be necessary for PG&E to upgrade the infrastructure that delivers electricity to a property.

Looking forward, we have piloted and tested various “smart charging” technologies that will make it easier for PEV customers to charge off-peak, using technologies such as the Home Area Network to interact with SmartMeter™ technology.

PG&E recently [collaborated with IBM and Honda](#) to help demonstrate that third parties are capable of providing grid services from PEVs.

More broadly, PG&E is working with national and international organizations to help develop codes and standards for electric vehicles and the necessary charging infrastructure. This includes actively supporting the development of the Society of Automotive Engineers standard of communications between PEVs and the grid as well as the Smart Grid standard Smart Energy Profile 2.0. This standard will ultimately facilitate “smart charging” and PEV load management programs that help customers safely, efficiently and cost-effectively charge their electric vehicles during off-peak hours.

Planning for the Future

When charging, a PEV has the potential to draw about three times as much power as a typical San Francisco house, presenting unique challenges to the local distribution grid.

Part of our efforts to prepare for more electric vehicle owners is managing the impact these cars may have on existing infrastructure. This may involve service upgrades in neighborhoods where multiple electric vehicles are being charged. We also continue to encourage off-peak charging.

Additionally, to help ensure a consistent electric vehicle strategy across the state, we continue to participate in the [California PEV Collaborative](#) and the [California Electric Transportation Coalition](#). We are also working with local officials and service providers on electric vehicle permitting, equipment and infrastructure issues.

Additionally, we are working with organizations such as the [Electrification Coalition](#) and [Electric Drive Transportation Association](#) to develop smart policies and incentives to encourage broader adoption of alternative fuel vehicles.

Community Investments

Through its **community investments**, PG&E engages, supports and improves the neighborhoods where our customers and employees live and work. Whether we are helping local communities launch new school programs for students interested in the energy industry or providing clean energy alternatives to underserved neighborhoods, PG&E is working to make a difference.



Through PG&E's New Energy Academy program, students participate in a curriculum of science, technology, engineering and mathematic classes.

About our Community Investments

In 2011, PG&E donated \$23.2 million to charitable organizations, representing an increase of 20 percent over the prior year's contributions of \$19.3 million. This met our target of 1.1 percent of our pre-tax earnings from operations from the prior year and included more than 1,400 grants to nonprofits. PG&E's community investment program is funded entirely by shareholders and has no impact on our customers' electricity or natural gas rates. Most of these contributions were made to nonprofit organizations in Northern and Central California. PG&E also makes in-kind contributions and provides other forms of support to community groups.

Employee Perspectives



Construction Specialist Norman Soares talks about employee involvement in PG&E's community outreach efforts.

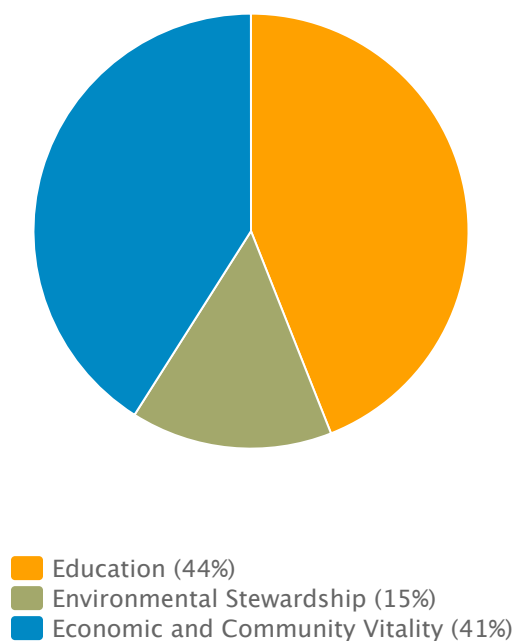
PG&E is an active participant in the lives of the communities we serve, supporting the good work of hundreds of local civic organizations. Here are some of the community awards we received for our work in 2011:

- **National Career Academy Coalition**—Henk Koning Exemplary Partnership Award for PG&E's New Energy Academy as a best in class public/private partnership
- **San Francisco Business Times**—Top Bay Area Corporate Philanthropists
- **Sacramento Business Journal**—Partners in Philanthropy Award

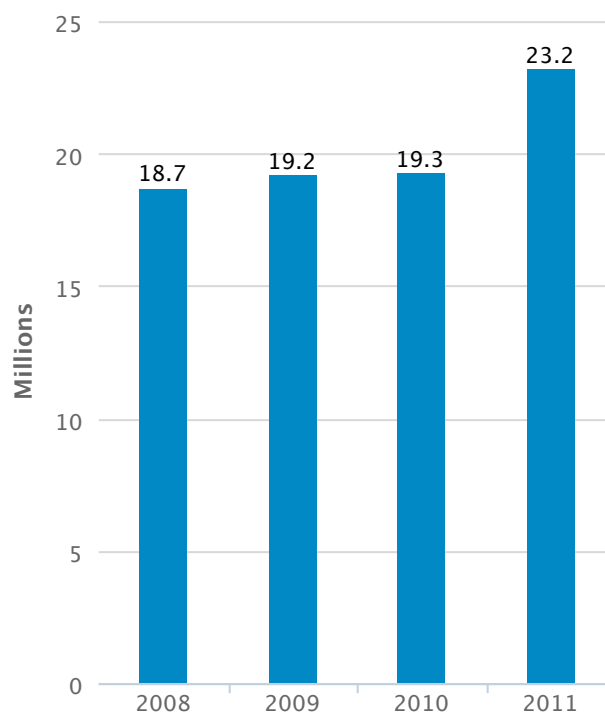
Community Investment Focus Areas

To achieve maximum impact in helping to address the needs of our communities, our community investment program focuses on three areas: Education, Environmental Stewardship, and Economic and Community Vitality. The chart below shows the breakdown across these areas.

2011 Charitable Contributions



Total Charitable Contributions



Education

Over the last decade, PG&E has provided about \$40 million toward educational initiatives. We support innovative programs that give students and teachers more opportunities to learn and prepare for their future, while also improving the future of California and the energy industry. Here's an example from

2011:

New Energy Academy

To help address the growing need for skilled trade crafts and “green” technology skills and to prepare students for success upon graduation, PG&E created the New Energy Academy program at five high schools in our service area in partnership with the California Department of Education. By focusing on a specific career theme, the academy



creates a school within a school. Once committed to the program, students participate in a curriculum comprised of relevant science, technology, engineering and mathematic classes.

Representing California’s first immersive energy training program of its kind for high school students, the academy’s nearly 350 students are located in select schools across the state: Berkeley High School of Berkeley, Foothill High School of Sacramento, Edison High School of Fresno, Independence High School of Bakersfield and Venture Academy of Stockton.

PG&E committed \$1 million in 2011 toward classroom enhancements, equipment and supplies and a \$1,000 scholarship for each student of the inaugural class graduating in 2013. [Pacific Gas and Electric Company President Chris Johns visited Independence High School in Bakersfield to announce this commitment and meet program participants.](#) Additionally, Edison High School celebrated a successful first year of the New Energy Academy.

Environmental Stewardship

PG&E understands the importance of supporting energy sustainability, environmental education and stewardship of our land and waters. We support partnerships that promote renewable energy and energy efficiency as well as local Earth Day projects that benefit our neighborhoods, parks and recreation areas.

PG&E’s Bright Ideas Grants

Recognizing that public schools are facing hard economic times, PG&E’s Bright Ideas Grants give teachers and schools the financial support and resources they need to help implement their innovative environmental and energy projects. In 2011, this program donated about \$420,000 to more than 60 schools in grants of up to \$10,000 each. Projects ranged from “green” campus upgrades to providing unique environmental learning opportunities for students.



One recipient was [Natoma Station Elementary in Folsom](#), which received a \$10,000 grant from PG&E. The school will use the money to develop a garden that will be used as an outdoor learning space for the students in kindergarten through sixth grade.

PG&E's Nature Restoration Trust

To help protect California's diverse wildlife, we established the PG&E Nature Restoration Trust with the National Fish and Wildlife Foundation. In partnership, the organizations provide matching grants to projects that benefit wildlife, fish and plant species in Northern and Central California. Major funding for the program comes from PG&E, which has committed more than \$2 million since 2000 to support projects throughout our service area.



The Trust seeks to fund projects that offer educational opportunities and encourage community involvement in conservation efforts. [For example, students from Davis High School traveled to the town of Winters last year to help transform six miles of Dry Creek into a wildlife habitat.](#) Working in coordination with Audubon California, the students planted trees and shrubs and installed irrigation systems. They also built and installed bird boxes to attract western bluebirds and tree swallows and added boxes for burrowing owls.

Economic and Community Vitality

PG&E is committed to invigorating the neighborhoods where our customers live and work. We focus on projects where we can leverage our expertise. These efforts include providing assistance to low-income

families with their utility bills, partnering with local organizations to support emergency preparedness efforts, investing in local economic and energy-related workforce development initiatives and supporting civic projects that vitalize the community.

Ready Neighborhoods Program

As a longtime partner of the Red Cross, PG&E understands the vital nature of disaster preparedness. In 2011, we renewed our support with a \$1 million pledge to the American Red Cross Ready Neighborhoods program. The program focuses on the most vulnerable communities across Northern and Central California, setting up disaster-preparedness resources by engaging community groups to help in the effort, identifying shelter locations, participating in response training and distributing free [emergency kits](#).

The program focuses on communities across our service area with a special emphasis on those with high levels of poverty, where residents often don't speak English or where residents have other potential difficulties in responding to a disaster. In its first year, the initiative was implemented in the Greater San Francisco Bay Area, Greater Fresno area and Greater Sacramento area.



[Learn more about the Red Cross “Prep Rally,” where PG&E made a \\$1 million pledge to support vulnerable communities.](#)

PG&E Playgrounds

Studies show that access to play builds skills that foster happier, healthier children who perform better in school. So PG&E is investing in the PG&E Playgrounds program —helping to build playgrounds in at-risk and underserved areas we serve.

Partnering with KaBOOM!, a nationwide nonprofit organization dedicated to saving play, and with local community partners, we are bringing playgrounds and the related benefits to children who need it most.

Community members and children participate in the playground-design

process, and then each site is built in a single day, all by PG&E and community volunteers. The KaBOOM! community-build model is designed to help a community not only construct a playground, but



strengthen existing coordination and resources, while building the skills needed to undertake future community improvements.

Watch a video showing how hundreds of volunteers built a playground in Santa Rosa in six hours.

Helping Underserved Communities

During 2011, more than 70 percent of PG&E's community investments provided assistance to underserved communities. This funding supported projects and organizations assisting people with low incomes, communities of color, women and girls, veterans, senior citizens, people with disabilities and members of the lesbian, gay, bisexual and transgender (LGBT) community.

We continue to give priority to viable local partners whose projects address recognized community needs, link to our key focus areas, provide an opportunity for employee volunteerism and are located within our service area.

In 2012, PG&E expects to again provide more than \$23 million in charitable funding, with an overarching emphasis on supporting underserved communities.

2012 Employee Giving Program

PG&E's Campaign for the Community is an annual employee and retiree giving campaign. Money raised from the campaign is used to support schools and other nonprofit organizations.

In our [2012 Campaign for the Community](#), employees pledged more than \$5.3 million—exceeding our \$5 million goal and setting a new record. The money raised for the campaign will be distributed throughout 2012 to 5,000 schools and nonprofit organizations—environmental groups, hospitals, community centers, food banks and many others—to help keep important programs and services alive in our communities. Pledges were made by 41 percent of employees and more than 400 retirees. Since 2000, PG&E's employee giving program has raised more than \$40 million for communities primarily within Northern and Central California.



Volunteerism and Community Support

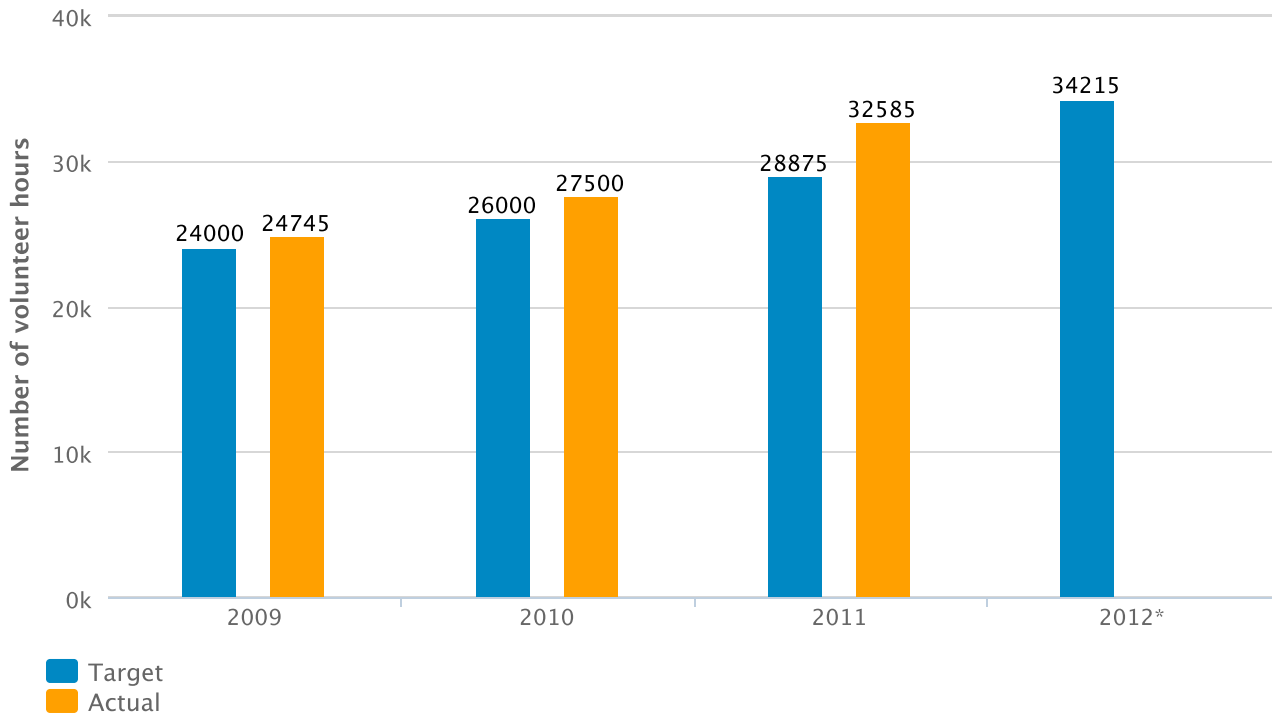
Whether enriching the lives of seniors, walking to raise money for cancer patients, repairing trails at state parks or mentoring young students, our employees continue to give back to the communities where they live and work.



Volunteer Program Results

In 2011, roughly 5,890 employee volunteers dedicated 32,585 hours at a wide variety of company-organized events during the year—exceeding our employee volunteer targets. These volunteer efforts translated into approximately \$710,000 in equivalent labor, using the industry standard value of \$21.79 for a volunteer hour. For 2012, we have set more aggressive targets of 34,215 hours from 6,185 employee volunteers at company-sponsored events, a 5 percent increase.

Employee Volunteer Hours



*2012 actual hours will be included in next year's report.

Our volunteerism and community engagement efforts continue to grow, in part because PG&E's community investment program places a priority on funding initiatives that offer an opportunity for employees to become engaged through volunteerism. Our efforts are also supported by a network of community relations representatives that work collaboratively with employees and our stakeholders.

There were numerous highlights last year:

- **Earth Day:** More than 1,200 volunteers, including employees, retirees and their friends and family members, participated in [PG&E's 2011 Earth Day Restoration and Cleanup](#) at 18 sites throughout our service area, demonstrating our values of community involvement, team spirit and environmental stewardship. At the event, which marked the 10th anniversary of PG&E's support of the [California State Parks Foundation](#), volunteers installed split-rail fencing, rebuilt garden boxes, restored trails and removed non-native vegetation.



Earth Day Highlights

- **San Luis Obispo County:** Planting Native Species for Earth Day at Montaña de Oro State Park
- **Alameda County:** Earth Day Cleanup at Eastshore State Park Draws Hundreds of Volunteers
- **Placer County:** PG&E Volunteers, CHP Helicopter Remove Trash from American River Canyon
- **San Mateo County:** Cleanup at San Bruno Mountain State Park Benefits People, Butterflies
- **Marin County:** Volunteers Hop on a Ferry to Cleanup Angel Island
- **Contra Costa County:** Volunteers Build a Fence at Mt. Diablo State Park
- **Sacramento County:** Volunteers Beautify Historic PG&E Powerhouse Park in Folsom
- **Sonoma County:** A Day at the Beach Means Good Clean Fun
- **Butte County:** Volunteers Build Bat Boxes to Help Population Grow

- **Engaging Students:** In the Sacramento Valley, employees visited elementary and middle schools last year to teach students about energy efficiency and energy safety. Employees challenged the students to track and reduce their gas and electric use, and returned a month later to get the results. They also directed students to [e-SMART Kids](#), PG&E's website that teaches children, teachers and parents about electric and gas safety.



- **Supporting Food Banks:** PG&E volunteers lent a hand at the [Second Harvest Food Bank of San Joaquin County](#), a resource that helps more than 35,000 people in need. Partnering with more than 200 nonprofit agencies and community centers, the [food bank](#) distributes approximately 1 million pounds of food each month. PG&E also presented the food bank with a \$25,000 donation to provide ongoing support of the food program and supplemental groceries for senior citizens who might be struggling to make ends meet.



- **Giving Habitat for Humanity Homes a Boost:** Employee volunteers helped construct new homes for families in numerous locations last year in [partnership with Habitat for Humanity](#). This included two new homes in Yolo County. As part of our Solar Habitat Program, PG&E also donated and installed solar panels for each of the homes, and is doing so for all Habitat-built homes throughout our service area.



In support of PG&E's focus on delivering safe, reliable and affordable gas and electric service, we launched a new community outreach initiative in 2012 to provide gas and electric safety demonstrations to the public at local

community and school events across the service area.

Serving the Community Through Nonprofit Boards

PG&E supports our communities through the active participation of its leadership on many nonprofit boards. Approximately 95 percent of the officers who have been with PG&E for more than a year serve on nonprofit boards.

Officers sit on the boards of a diverse group of nonprofits, such as [YMCA of San Francisco](#), [the Monument Crisis Center](#) and [Big Brothers Big Sisters of the Bay Area](#). PG&E employees from throughout the organization are sought after as members of nonprofit boards, and they serve a range of organizations.

Honoring Volunteers Who Support their Communities

For 25 years, PG&E has recognized its top volunteers with an award named for Frederick W. Mielke, Jr., a former chairman and Chief Executive Officer of Pacific Gas and Electric Company who demonstrated tireless community service. In 2011, PG&E donated \$5,000 to the nonprofit organization of each winner's choice. Five semi-finalists also received a \$1,000 donation from PG&E to a designated nonprofit.

In addition, one of the winners, Samantha Allen-Wise, was chosen in an employee poll to represent PG&E in Washington, DC, at the annual Jefferson Awards for Public Service, a national prize for community service.



Samantha Allen-Wise has been with PG&E for 11 years and is senior executive assistant to PG&E Corporation's Senior Vice President and General Counsel. She is a founder and director of C.E.O. ([Community Enrichment Organization](#)), an Oakland nonprofit formed in 2004 that sponsors about a dozen events and activities per year to enrich the lives of low-income families, children and seniors. Activities range from Easter egg hunts and holiday gift-giving to cheerleading camps and flag football games.



Margi Carducci is a senior business analyst at Diablo Canyon Power Plant who has been with PG&E for 25 years. Moved by her own mother's death from cancer many years ago, she got involved with her local [Relay for Life](#), a nationwide 24-hour fundraiser for the American Cancer Society that brings together sponsored teams to walk, memorialize and celebrate lives touched by cancer. Thirteen years ago, she started a team and has been the team captain ever since.



Vicki Leinweber has been with PG&E for nearly 10 years. She is a manager's assistant for Customer Fund Management in Concord. Four years ago, she began volunteering with the [Bay Area Crisis Nursery](#), a nonprofit that offers temporary shelter to children whose families are in crisis. The loss of her husband inspired her to volunteer at the Nursery.



Lisa Moniz is a manager in Finance Performance Systems and has been with PG&E for more than three years. She feels a connection to the nonprofit [Support for Families of Children with Disabilities](#) based upon her own history with disability: she was born blind into a low-income family, and the Lins Foundation paid for her cataract surgery and eyeglasses. Lisa estimates that she volunteers for at least 30 events a year with different charities and always likes to bring co-workers and friends along.



Larry Price is a senior advising engineer and emergency diesel generator system engineer at Diablo Canyon Power Plant. Larry has been with PG&E for nearly 24 years. In his spare time, he mentors an award-winning FIRST [\(For Inspiration and Recognition of Science and Technology\)](#) robotics team at Atascadero High School. Larry became involved nine years ago because it sounded like a fun activity for his son and him to share.

Employees

As we embrace sweeping changes in our business, our focus on our people remains PG&E's bedrock. Engaged, well-trained and diverse employees are essential to our long-term success and to providing the service our customers deserve.

Today more than ever, we are focused on creating a workplace that fosters the safety, health and well-being of our employees and emphasizes connections with our customers. We are building a more diverse workforce to better reflect the diversity of our customers. We are fostering a culture that encourages and inspires innovative solutions to the challenges that we and our industry face. And we are building new careers through mentoring, training and new technologies to position PG&E for future success.

Key Sustainability Indicators

● = meets or exceeds target ● = below target ● = substantially below target

2011 Target	Progress	2011 Result	2012 Target
Employee Engagement			
Achieve 69.6% favorable responses to 8 questions on employee survey, which measures employee engagement ¹	●	67.2%	69.2%
Diversity and Inclusion			
Achieve 70.0% favorable responses to 3 questions on employee survey that are indicative of an environment where diversity is valued and inclusion is practiced	N/A ²	65.6%	67.6%

¹ The employee survey includes an 8 item measure of engagement known as the Employee Engagement Index (EEI). The EEI is benchmarked against nearly 200 companies on Fortune's lists of "Best Companies to Work For" and "Most Admired Companies." For 2011, PG&E ranked in the third quartile compared to this group of highly-regarded companies.

² The three questions from the employee survey used for the Diversity and Inclusion index changed in 2011; therefore, a comparison to 2010 results is not applicable and a progress rating was not assigned.

Diversity and Inclusion

At PG&E, we seek to promote an inclusive culture and diverse workforce—one that better reflects the diversity of our customers, works to meet different customer needs and builds a strong and **diverse supply chain**. This commitment to diversity and inclusion is a critical part of our values and how we strive to approach each person every day.



Key Activities and Highlights

Embracing different ideas and perspectives enables us to better anticipate, understand and respond to the needs of our customers, which are among the most diverse in the country. It also helps to spur innovation as we focus on our fundamental responsibility to deliver safe, reliable and affordable gas and electric service.

Through the leadership of the Pacific Gas and Electric Company Vice President, Talent Management and Chief Diversity Officer, and with the support of the senior leadership team, PG&E is making progress toward these objectives. A Diversity and Inclusion Steering Committee, comprised of a mix of leaders from across PG&E, provides feedback to help ensure that our action plans are effective and integrated into the business.

In 2011, we remained focused on our vision to promote an inclusive culture in our workforce:

- We continued to embed diversity and inclusion principles and processes into the full "lifecycle" of our workforce planning—from initial workforce development and recruiting to performance management to career and leadership development. We also partnered with diverse professional and trade associations and community partners to help us identify and recruit talent for current openings.
- We continued our learning programs, to continue to expand awareness of the unique differences among individuals and groups so we can better serve the needs of our diverse customers. An example is a full-day



Inclusion Leadership Workshop for new leaders that focuses on the ways in which diversity and inclusion benefits PG&E and enhances skills to create a more inclusive workplace.

- We launched an internal campaign featuring employees from across our service area, who shared their stories about why diversity matters. The goal of the campaign was to raise awareness about what diversity and inclusion means and inspire others to take action.
- We maintained our network of Workforce Diversity and Inclusion Champions to help strengthen our commitment across PG&E. The network improves accountability by creating and implementing action plans that reinforce support from our leadership, expand learning commitments and allow departments to track and monitor results during the year.
- We continued to expand our Mentoring Program as a tool to advance women and minorities in PG&E—building leadership skills and helping employees grow through networking. We have more than 675 active mentoring relationships in place, a 40 percent increase from 2010. More than 2,800 employees have participated in the program.

Photo: Frank Jang

Hundreds of employees attended PG&E's 16th Annual Diversity Celebration, which showcased PG&E's commitment to diversity and inclusion.

Recognizing Diversity Champions

Our President's Diversity Champion Awards recognize employees who have taken the initiative to promote diversity and inclusion in the workplace—among coworkers, with clients or with customers—and who exemplify PG&E's commitment to diversity and inclusion through their behaviors and actions.

In 2011, the awards were presented to employees Janine Lee and Miyuki Iwahashi. Janine is on the board of InspirAsian, one of our Employee Resource Groups (ERGs), and also serves as the Founder and CEO of a 100 percent volunteer-run non-profit organization, Capture the Dream, Inc., which helps low-income children with their educational endeavors.



Chris Johns, President of Pacific Gas and Electric Company, and Bill Harper, Vice President of Talent Management and Chief Diversity Officer, recognize the diversity champions.

Photo: Frank Jang

Miyuki leads the CFO's Diversity and Inclusion Council, where she has worked to drive initiatives that promote and raise awareness of diversity and inclusion in the Finance organization. Her efforts include activities designed to increase employee engagement, such as a Finance Mentoring Workshop, department diversity outings and engagement with external diversity organizations.

Two other employees earned honorable mentions: Gina Sierra for her involvement in the BEA ERG (Black) and Ken Trinh for his work in the PG&E Mentorship Program and his ERG leadership.

In 2011, special recognition was given to the ERG Collaborative Field Team for their contributions to engaging employees in field locations.

In 2012, we plan to refresh the content of our Inclusion Leadership Workshop for leaders, add learning opportunities for diversity and inclusion via a series of short videos and facilitation guides and deepen the partnership with lines of business and recruiting to increase diversity in our candidate pools.

Our Employee Resource Groups

For decades, PG&E's Employee Resource Groups (ERGs) have helped drive an inclusive culture by leveraging the experiences, ideas, backgrounds and perspectives of our employees. The groups do this through workshops, programs and networking events. They also provide opportunities for employees to develop their careers, grow as leaders and get involved in their local community. The ERGs' insight has also helped drive important policy changes within PG&E, benefitting all employees.

PG&E's ten ERGs are: Access Network (people with disabilities); BEA ERG (Black); InspirAsian, Samahan (Filipino); Latino; Legacy (tenured employees); NuEnergy (new to the workforce or PG&E); PrideNetwork (LGBT); Veterans; and Women's Network. The Veterans ERG was added in 2012.

ERGs are also working together in innovative ways. For example, the Legacy and NuEnergy ERGs cofounded a mentoring program to share knowledge between tenured and newer employees.

More than 3,600 employees, or 18 percent of our workforce, participate in the groups, which saw increased engagement with PG&E's senior leadership and growing involvement from employees in field locations in 2011. ERGs also grew from 18 to 23 chapter locations since 2010, an 18 percent increase in the past two years.

Together, ERGs awarded \$255,000 in scholarships to more than 150 college-bound and returning college students in 2011. Since the inception of the scholarship program in 1989, our ERGs have provided more than \$2 million to recipients throughout Northern and Central California.

Our ERGs also gave back to the community through food, clothing, school supply and backpack drives, as well as providing basic necessities to veterans. All told, ERG members participated in more than 250 community events, including the annual AIDS Walk, Chinese New Year and Pistahan Parades and international disaster relief efforts.

Working with nonprofit and trade organizations, ERGs are also sharing information with customers on PG&E services and programs. This included information on programs such as the [California Alternate Rates for](#)

Energy (CARE), SmartMeter™ devices and emergency preparedness—often in more than one language.

These achievements speak to the vital role ERGs continue to play in PG&E's success—enhancing employee engagement by recognizing, valuing and supporting each employee's potential to succeed and furthering our commitment to the communities we serve.



Employees participated in San Francisco's annual Chinese New Year Parade.

Measuring Progress

As one measure of progress, we track employee responses to three questions on an employee survey that asks if PG&E supports an environment where diversity is valued and inclusion is practiced.

For 2011, we changed the overall questions from the employee survey to be more targeted and wherever possible to enable benchmarking with other employers. In 2011, roughly two-thirds, or 65.6 percent, of employees reported a favorable response to the questions.

The responses from the survey have confirmed that our overall strategy is still relevant and impactful. The responses also help to guide specific plans and activities to support ongoing change, and influence the selection of topics addressed in continued training and communications. [Learn more about our broader employee engagement efforts.](#)

Our Diverse Workforce

PG&E is committed to advancing our vision of a workforce that reflects the diverse communities we serve. Our workforce statistics by race, ethnicity and gender for 2009 to 2011 are presented in the table below, using Equal Employment Opportunity Commission (EEOC) definitions.

Representation of Women and Minorities in PG&E's Workforce, 2009 – 2011

EEOC Category	2009	2010	2011
Women	27.9%	28.2%	28.5%
Officials and Managers	27.4%	30.9%	31.7%
Professionals	38.8%	35.8%	36.1%

EEOC Category	2009	2010	2011
Technicians	17.5%	18.3%	18.8%
Administrative Support Workers	69.2%	70.1%	71.0%
Craft Workers	2.6%	2.6%	2.6%
Operatives	13.1%	15.9%	13.3%
Laborers and Helpers	8.6%	8.3%	8.1%
Service Workers	8.2%	12.6%	10.8%
Minorities	38.6%	38.8%	39.2%
Officials and Managers	29.1%	27.7%	27.8%
Professionals	42.6%	40.3%	41.0%
Technicians	37.1%	36.7%	37.9%
Administrative Support Workers	55.4%	55.9%	57.1%
Craft Workers	30.2%	30.2%	30.4%
Operatives	41.5%	41.8%	41.6%
Laborers and Helpers	44.6%	46.7%	43.9%
Service Workers	27.3%	29.3%	29.3%

Source: PG&E Corporation EEO-1 Report, as of July 1, 2011

The percentage of women and minorities in PG&E's workforce continues to trend above the national average.

Comparison of PG&E's Representation of Women and Minorities with the National Utility Average

Category	PG&E	National Gas and Electric Utility Average¹
Women	28.5%	25.2%
Minorities	39.2%	23.4%

¹ Source: U.S. Equal Employment Opportunity Commission 2010 EEO-1 Survey

Representation of Minority Groups in PG&E's Workforce, 2009 – 2011

Category	2009	2010	2011
American Indian or Alaskan Native	1.7%	1.7%	1.6%
Asian	14.4%	14.4%	14.7%
Black/African American	6.8%	6.6%	6.5%
Hispanic/Latino	15.1%	15.4%	15.4%
Native Hawaiian or Pacific Islander	0.2%	0.2%	0.2%
Two or More Races	0.4%	0.6%	0.9%

Internal Monitoring

The Public Policy Committee of PG&E Corporation's Board of Directors regularly reviews our diversity and inclusion practices and performance.

Our Diversity and Inclusion Steering Committee—comprised of a mix of leaders from across PG&E—reviews our progress on a regular basis. Additionally, we report our workforce statistics to the California Public Utilities Commission annually through a consolidated report compiled by the [California Utilities Diversity Council](#).

Equal Employment Opportunity and Affirmative Action

PG&E has a long-standing commitment to employment policies and practices that meet the highest legal and ethical standards. We are also committed to ensuring these policies and practices deliver results. It is our policy that all employees have equal opportunities for jobs, training and promotions, regardless of race, color, national origin, ancestry, sex, age, religion, physical or mental disability, medical condition, veteran status, marital status, pregnancy, sexual orientation, gender identity, gender expression, genetic information or any other factor that is not related to the job.

We are deeply committed to maintaining a workplace that is free from harassment and discrimination for all of our employees. As a federal contractor, PG&E has a legal mandate to take affirmative action to provide equal opportunity in employment by eliminating artificial barriers to the recruitment, hiring and promotion of qualified individuals, especially minorities, women, individuals with disabilities and special covered veterans.

PG&E complies with the U.S. Department of Labor's Office of Federal Contract Compliance Programs (OFCCP) requirement to maintain Affirmative Action Plans (AAPs). The company's AAPs are subject to potential audits by the OFCCP in any given year. These plans, along with our other diversity and inclusion initiatives, demonstrate our dedication to affirmative action and help ensure that our full support will be given to the equal employment opportunity for all employees. Our affirmative action programs are also tools to help ensure that we develop a diverse workforce prepared to meet the challenges of the future.

Recognition for Diversity and Inclusion

From employment to philanthropy and purchasing, our diversity and inclusion commitment and accomplishments have been recognized repeatedly over the years by respected third-party evaluators. Most recently, PG&E Corporation or Pacific Gas and Electric Company have been recognized by:

- **Black Enterprise magazine**—listed as one of its “40 Best Companies for Diversity”
- **DiversityInc**—ranked second on the “Top 5 Regional Utilities for Diversity,” eighth on the “Top 10 Companies for Supplier Diversity” and ninth on the “Top 10 Companies for Latinos in 2011”
- **Hispanic Business magazine**—named to the “Diversity Elite 2011”
- **Human Rights Campaign**—received a perfect score of 100 on its Corporate Equality Index
- **LATINA Style Magazine**—named to the “Top 50 Companies for Latinas to Work For in America”
- **Minority Corporate Counsel Association**—Employer of Choice Award for 2011 for the Western Region
- **Profiles in Diversity Journal**—named PG&E a “2011 Leading Company for People with Disabilities”

Career Development and Learning

We continue to develop leaders from within PG&E, at all levels and in all roles. Through new strategies and training programs, we are working to create a culture where the next generation of leaders is always emerging behind the current one.



Engaging Our Employees

For PG&E to be successful, it's critical that we engage our employees to drive better business outcomes, including improvements in safety, customer satisfaction, financial performance and environmental leadership.

Engaged employees connect to PG&E's vision, feel a sense of ownership for PG&E's success and actively contribute to improve business performance. Creating a work environment high in engagement requires the participation of all employees—sharing ideas and solutions, supporting one another and maintaining an active dialogue help us make and implement the best decisions for PG&E.

In 2011, we continued to refine and simplify our employee survey, which provides the metric by which we evaluate employee engagement, so that it provides results that can be benchmarked. We achieved a record response rate to the voluntary survey, and our employee engagement score showed a favorable response from more than 67 percent of survey respondents, indicating engagement.

While comparable to the previous year's result, it fell short of our target. Based on statistical analysis of the survey data, employee learning and development is one of our greatest opportunities to improve employee engagement—better addressing employees' desire to learn, to be challenged on the job and to pursue growth opportunities. In response to this feedback, team leaders developed targeted employee engagement "action plans" that are currently being implemented and include actions to address employee learning and development. We now have engagement plans from workgroups across PG&E.

We have established a 2012 goal of 69.2 percent, an increase over last year's results. [We have also set a goal specific to diversity and inclusion.](#)

Employee Perspectives



Towerman Manuel Guerrero talks about PG&E's use of helicopters to better serve our customers.

Learning and Development Opportunities

Our training programs are led by [PG&E Academy](#), a centralized learning organization committed to enhancing workforce skills, qualifications and career development. Important highlights for the Academy in 2011 included:

- **Technical Training:** We continued to provide our employees with training on technical topics. This included updated training programs for employees performing work on our electric transmission and distribution lines and hands-on training for employees responsible for maintenance and construction, power restoration and substation maintenance. We also offered training for new gas engineers, for technicians on new valves being installed and for hundreds of other employees on documentation and record retention.
- **Career Development:** We continued to focus on professional development, offering more than 30 courses on a range of topics—including effective communication, teamwork, supervision and project management—which provide skills designed to grow leaders from within and, at the same time, foster greater alignment with PG&E's vision, values and business strategy. We also collaborated on a new one-stop-shop for online career resources for all employees and launched a leadership program for front-line supervisors.
- **Mobile Classroom:** We created a new mobile training center that allow PG&E to conduct brief, on-site trainings with employees in a convenient manner, rather than having to bring those employees to one of our training centers.

In 2011, we introduced a new Supervisor Leadership Program, which works with supervisors to develop their leadership skills. The program focuses on four main areas—safety, supervisor fundamentals, business fundamentals and performance management—and it covers topics such as communication skills, working with diverse styles, leadership and how to create a work environment that reflects our core values.

More than 200 of our supervisors participated in the program in 2011; a majority of our supervisory team is scheduled to complete the program by the end of 2014.

We continue to expand our leadership

- **Enabling Technologies:** As we deploy new tools and technologies for our workforce, we are focused on making sure we have a smooth transition for our employees. This includes training for new radio systems and updated field technology (such as tablets and leak detection equipment) for our field employees. To properly prepare PG&E for these changes, we are developing management, training and communications programs to improve the ability of our employees to use the new technologies.

development and will complement the supervisor program with manager- and crew-led level programs in 2012 and 2013, respectively.

Last year, we delivered approximately 41,000 student days of training at PG&E's Livermore Training and Qualification Center and the [San Ramon Valley Conference Center](#). The Livermore facility is a 44-acre, state-of-the-art training complex designed to provide hands-on learning experiences for transmission and distribution employees. The San Ramon Valley Conference Center offers a variety of additional technical courses in a classroom setting.

To gauge the success of our training program, we survey participating employees to measure the overall quality of the training, as well as their increased level of knowledge. We are using these survey results to improve our training programs.

We are also building careers at PG&E through our [MBA Leadership Program](#), a two-year program that enables graduates from the nation's top business schools to work on some of our toughest business challenges.

We continue to expand our mentoring program as a tool to help employees build leadership skills and grow professionally. We also strengthened our [Employee Resource Groups](#), which contribute to the personal and professional development of thousands of employees and provide opportunities to engage employees in service to our communities.

Looking ahead, we are increasing our focus on succession planning to prepare for the workforce of the future, and we will pilot a program to develop high-potential employees for critical positions in our business.

Capturing the Knowledge of Our Workforce

As a portion of our workforce approaches retirement, we are working to capture the knowledge of key personnel before they leave PG&E. We have worked to identify the most critical positions within PG&E that rely upon tacit knowledge and take steps to retain that information and reinfuse it back into work practices, training or other personnel.

We start with positions where employee knowledge is essential to safe electric and gas operations. We then use a variety of products, services and tools to identify, capture and prioritize the specific knowledge and skills required. We use that information to develop concrete, actionable responses to facilitate the smooth transfer of knowledge.

Fostering Health and Wellness

At PG&E, we are committed to the health and well-being of our employees—offering a range of programs and services, while also empowering our employees to make healthier choices. We have added wellness programs, increased participation in our current offerings and are making changes to our medical plan design to integrate more wellness opportunities and to focus on quality preventive care for employees.

In fact, the *San Francisco Business Times* and the *Silicon Valley/San Jose Business Journal* named PG&E among the healthiest employers in the San Francisco Bay Area for 2011.



Working with Our Unions

Proactively investing in the health of our employees is a necessity for PG&E's long-term success. An important area of focus is [working with our labor unions](#), which represent roughly two-thirds of our workforce.

By working collaboratively with a broad section of stakeholders—including PG&E and union leadership, management and union-represented employees, consultants in the medical field and our own human-resource experts—we jointly developed a new medical plan, designed to improve the overall health of our workforce.

The plan—which emphasizes preventive care and wellness—better leverages our ability to purchase higher quality care and focuses on free primary and preventive services. The plan will be implemented for union-represented employees, as well as management and administrative and technical employees.

Creating a Culture of Wellness

PG&E's efforts on employee wellness begin with a focus on quality preventive care, recognizing that many chronic conditions can be managed effectively with early detection and the adoption of healthy behaviors such as nutrition, exercise and not using tobacco. For example, we offered a free flu shot program in 2011 in which nearly 5,500 people participated—a 34 percent increase over the prior year. We also held health screenings for more than 950 employees. These free screenings focused on identifying potential health risks, and they measured cholesterol, glucose, blood pressure and body mass index.

PG&E is committed to increasing employee fitness and providing opportunities for employees to improve their health. In 2011, we launched a reimbursement program for employees to obtain certification to teach on-site fitness classes at work. We also conducted extensive qualitative research with employees regarding their health and wellness needs, including focus groups, interviews and meetings with vendors. We are introducing a wellness and benefits advocacy vendor to improve employee participation, enhance the quality of care received by employees and their families and support employees in making healthy lifestyle choices.

PG&E remains committed to helping employees obtain and maintain a tobacco-free lifestyle with our tobacco cessation program. Participation in “Smokeless” is free to employees and their families and includes one year of unlimited coaching from certified coaches, nicotine replacement therapy with gum or the patch and a guided self-help book and CD. To help improve employee fitness, we continue to offer subsidy programs through GlobalFit, a healthy lifestyle vendor that offers discounted gym memberships, online exercise classes and nutrition support, health coaching and home exercise equipment at reduced rates.

In addition, we saw increased participation in other wellness programs. More than 1,500 employees participated in “Active for Life,” a 10-week physical fitness program led by the [American Cancer Society](#) that encourages employees to be more active on a regular basis. We also partnered with the [American Heart Association](#) to celebrate “National Start Walking Day,” designed to get employees moving and complete a 30 minute heart-healthy walk; more than 200 employees participated in this event.



A 25-member cycling team of employees raised more than \$100,000 to fight HIV/AIDS in the annual AIDS LifeCycle, a bike ride from San Francisco to Los Angeles.

We created an Industrial Athlete Program for linemen, designed to reduce injuries and improve the physical and mental resilience of these employees. In 2011, we began post-offer physical assessments to help ensure new hires for the position of lineman are physically fit for duty. The program also includes a full day of curriculum devoted to physical fitness, nutrition, hydration, back care and the importance of being tobacco free. We plan to expand this program with online resources in 2013.

We also provide on-site ergonomic assistance for PG&E’s offices, call centers and payment centers. Employees also use an online break and stretching reminder software program.

Building Momentum at the Grassroots Level

We are helping to foster a strong grassroots effort on improving employee health and wellness. Wellness Ambassadors across PG&E assist in implementing and increasing awareness of wellness programs and services available to employees. The group of employee volunteers participates in monthly meetings where they are exposed to a robust curriculum, including the science of behavior change, health promotion basics and tools they can share with coworkers. Employees have also organized healthy weight-loss challenges and Weight Watchers meetings.

The efforts of these local wellness ambassadors are complemented by wellness fairs and practical tips through newsletters, posters and guest speakers that are available to employees generally.

Supporting Employees in Need

We continue to offer an Employee Assistance Program (EAP), which consists of free and confidential counseling sessions, support, referrals and information to help employees and their family members. Counselors are conveniently located at 10 work locations throughout our service area and in the communities where employees live.

The EAP hotline is staffed 24 hours a day, seven days a week by licensed clinicians. In addition to counseling, the EAP makes employees' lives less stressful by offering free financial, legal and work-life guidance and referrals to child and elder care resources.

Working With Our Unions

Approximately two-thirds of PG&E's 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 (ESC) IFPTE Local 20 and the Service Employees International Union (SEIU) United Service Workers West.

These employees support a range of areas that are critical for our business, including gas and electric operations, customer services, power generation, environmental and land services, telecommunications and shared services.

We continue to work with our labor unions to meet the challenges facing our business in our shared effort to improve service, deploy new technologies and strengthen PG&E's safety culture.



Key Activities and Highlights

PG&E and the unions continue to work 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 each of our three unions, a negotiated labor agreement establishes the working rules and other terms and conditions of employment. During the past year, PG&E and IBEW have collaborated on developing a new medical plan for active employees that emphasizes preventive care and incents annual health screenings and smoking cessation. IBEW-, ESC- and SEIU-represented employees recently ratified table agreements on new contracts that include the new medical plan and replace the pension plan with a cash balance plan for newly hired employees.

In addition, union-represented employees continue to actively participate in employee-driven efforts to foster a safety-first environment, with the goal of reducing and eliminating injuries and promoting safe practices at all times. For example, “Control the Pressure” is a peer-to-peer campaign spearheaded by the IBEW Local 1245 to promote gas safety among employees. “Control the Pressure” and our other employee-driven safety efforts are increasingly engaging our workforce and encouraging a safety culture where employees look out for one another.

Workforce Development and Training

We offer an apprenticeship system for a variety of career paths for our union-represented employees. Our

35 state-certified apprenticeship training programs provide specialized, on-the-job and academic training to eligible union-represented employees who want to become certified in a certain trade. Examples of these trades include lineman, electrician and welder. At the end of 2011, there were more than 450 PG&E apprentices. For more information about apprenticeships in California, visit the [Department of Industrial Relations—Division of Apprentice Standards](#).

We also worked closely with the IBEW to launch a new, complementary effort in 2011—the [pre-apprentice line worker program](#)—in which candidates receive formal training and assessments. Those who complete the one-year program will become apprentice linemen, the beginning of a 48 month apprenticeship. We expect to hire up to 60 new pre-apprentice linemen in 2012.

More broadly, we continue to assess our future hiring needs among union-represented employees, considering a number of important factors such as expected retirements and other attrition, as well as changing technologies that require new skill sets. Our future plans include significant hiring in our gas and electric field operations, contact centers and a new meter position responsible for maintenance of SmartMeter™ devices. Due to expected retirements, Pacific Gas and Electric Company and IBEW have established targets for filling hundreds of key apprentice positions between 2012 and 2014.

Economic Vitality

PG&E plays an integral role in the local economies of dozens of counties and hundreds of cities across Northern and Central California. As we work to modernize our gas and electric infrastructure, we are making investments that will benefit the communities we serve by generating new jobs and stimulating economic growth. This includes an ongoing commitment to expand the diversity of our supply chain by supporting many small- and medium-sized California-based businesses.

Recognizing the difficult economic conditions faced by many customers, our commitment emphasizes providing our customers with energy that's affordable. Our efforts in this area range from a proposed economic-development rate to lower energy costs for qualifying businesses to a suite of programs that help customers in need, such as incentives to make homes and businesses more energy efficient, which save customers energy and money.

Key Sustainability Indicators

● = meets or exceeds target ● = below target ● = substantially below target

2011 Target	Progress	2011 Result	2012 Target
We expect to provide progress on an expanded set of performance measures in future reports.			
Supplier Diversity			
34% of overall spending on diverse certified firms, a voluntary target	●	36.6 %	37.3%
Workforce Development			
Percentage of PowerPathway graduates hired into industry jobs	N/A ¹	60%	65%
Programs to Assist Low-Income Customers			
Weatherize 124,991 homes through Energy Savings Assistance Program	●	128,071 homes	115,000 homes
Enroll 1,530,000 eligible customers in the CARE program ²	●	1,532,692 customers enrolled	Enroll 1,553,000 eligible customers

¹ There was no target for this metric in 2011.

² The California Alternate Rates for Energy (CARE) program provides a monthly discount on energy bills for income-qualified households and housing facilities.

Fostering Economic Vitality Across Our Business

PG&E has the privilege of serving 15 million Californians—homes and businesses that encompass a diverse array of customers and communities. We recognize that many of these communities have been hard hit by the economic downturn and that customers continue to face high unemployment, housing foreclosures and other economic challenges.

As one of the state's largest employers and a key contributor to California's economy, PG&E is focused on the economic health of our customers and California. As we build for the long term, the investments we are making to improve our operations will help make California stronger and will support efforts to revitalize the state's economy. We also understand that PG&E's future success will depend on the success of the communities we serve—a fact that drives our continued focus on serving customers locally and fostering economic vitality among underserved constituencies.



Photo courtesy of First Solar, Inc.

Investing in Infrastructure

PG&E is making major investments to deliver a safe, reliable and affordable energy future that will benefit our customers and facilitate a cleaner, more diverse energy supply.

Looking forward, [PG&E has asked state regulators for approval](#) to make investments in 2014 to 2016 that will enable us to modernize our system and accelerate the progress we have already begun to make toward our long-term goal of being the safest utility in the country.

These investments would not only improve the competitiveness of businesses in our service area by providing them the platform of a 21st century energy infrastructure. They will also generate new jobs and stimulate economic growth throughout the state.

The proposal would enable PG&E to:

- Hire 2,200 more employees dedicated to improving system safety, reliability and customer service.
- Support about 39,000 jobs in California and generate an estimated \$9 billion each year in positive economic impact from sales of goods and services statewide.

- Generate an estimated \$685 million per year in California state and local tax revenue as a consequence of the added worker income and business sales.

Building Career Pathways

PG&E is actively [building career pathways](#) into the energy sector, and we're doing so in a collaborative way that emphasizes underserved communities in our outreach to build a skilled, diverse and qualified talent pool.

These efforts help address a challenge that's seen across the utility industry: Many of the nation's utility workers are nearing the end of their careers. At PG&E, over the next five years, we estimate that more than 40 percent of our workforce will become eligible for retirement.

PG&E PowerPathway

PG&E is taking a multi-pronged approach to close this gap. For example, through [PG&E's PowerPathway™ program](#), we are partnering with the education and workforce investment communities, labor and industry employers to prepare individuals for high-demand positions at PG&E and throughout the energy and utility industries.

We also remain [focused on recruiting veterans](#) to PG&E, and were pleased to hire 225 veterans in 2011, or about 7 percent of our total hires. The attention from PG&E and other organizations comes as the unemployment rate of veterans is nearly 40 percent higher than the general population.

Building a More Sustainable Supply Chain

PG&E has more than 5,000 suppliers in its supply chain, with an average annual spend of about \$4 billion toward firms that provide cables and wires, construction services and a host of other equipment and services. As PG&E works to build a more sustainable supply chain, we are focused on operational excellence and continuous improvement across a range of areas, including promoting safety, maintaining a high ethical standard and reducing environmental impacts.

In doing so, we are fostering economic vitality and job creation in the communities we serve. For example, PG&E has been working for more than three decades to bring more [diverse suppliers and small businesses](#) into our supply chain. In fact, according to the CPUC, Pacific Gas and Electric Company (Utility) spent more on products and services from businesses owned by minorities, women, and service-disabled veterans than any of the state's more than 30 other utilities and telecommunication companies in 2011.

We achieved these results by engaging with our suppliers and a variety of organizations at the local, state and national level to promote supplier diversity, generate innovation and increase competition. In addition, we've played an important role by providing small businesses—a vital source of jobs and economic activity in the communities we serve—with technical assistance training.

PG&E is also supporting California's economy by fulfilling other operational needs. Recently, we were

honored to help cut the ribbon at a [new green-fleet manufacturing plant](#) near Sacramento that will build low-emission bucket trucks. PG&E's commitment to purchase hundreds of the trucks from Altec Industries will help support about 100 new manufacturing jobs at the facility—promoting sustainability in our operations while keeping the benefits close to home.



Altec Industries opened a green-vehicle manufacturing facility to produce low-emission bucket trucks for PG&E.

Focusing on Affordability

As we make investments to deliver the service our customers expect, we understand that it is critically important to keep customer energy bills affordable.

With this in mind, PG&E offers many ways for customers to save money by saving energy, including extensive [energy efficiency assistance](#), online tools to analyze energy use and rebates for energy-efficient products.

We also work to connect customers with our assistance programs before they find themselves unable to make their utility payments. Our support includes financial assistance programs such as [California Alternate Rates for Energy \(CARE\)](#), [Relief for Energy Assistance through Community Help \(REACH\)](#) and the [Energy Savings Assistance Program](#) to provide income-qualified customers with a variety of services to help them meet their energy needs.

Additionally, PG&E maintains a modest but long-standing team dedicated to helping retain, expand and create business within our service area. For the last several decades, this team has leveraged partnerships with local, regional and statewide economic organizations to streamline procedures and eliminate barriers for businesses. The team provides one-on-one assistance to current and future customers and focuses on tools, as well as regulatory options, to help grow PG&E's economic development offerings.

In light of continued economic challenges and increased customer needs, we are working to expand our field presence and enhance our rate offerings. For example, in 2012, we asked state regulators for permission to offer a [new electric rate](#) aimed at helping attract jobs to California or retain them here. If approved, the rate will apply to large employers—PG&E customers with power loads of at least 200 kilowatts—that have a choice of where to locate operations and hire employees. More than 30 cities and counties and additional non-government entities have expressed support for the proposed rate option.

The rate would provide a 12 percent rate reduction for five years for companies that attest that it is needed

to enable them to site new operations, expand existing facilities or stay in California. An enhanced option, with a reduction of 35 percent, would apply in counties with unemployment rates that are at least 25 percent above the state average. The new rate would replace an existing program that PG&E began offering in 2005. The current program's rate reduction has declined over time and is scheduled to sunset at the end of 2012.

Partnering on Local Economic and Community Vitality

PG&E is also partnering in the state's economic recovery through our [community investments](#), which totaled more than \$23 million in 2011. These donations to charitable organizations include assistance to low-income families with their utility bills, investments in local economic and energy-related workforce development initiatives and support for civic projects that vitalize the community. In fact, Economic and Community Vitality represents one of the three focus areas for our community investments.

Through our community investments, we continue to support local nonprofit organizations to strengthen job creation, particularly in communities that have been hardest hit by the recession.

For example, last year, we supported the grand opening of the Fresno Area Hispanic Chamber's new [Downtown Business Hub](#). Widely acclaimed for its role as the first bi-lingual business incubator in the Western United States, the facility opened with the goal of annually providing more than 300 business owners with resources to help them start or expand a business and to provide office space for 8 to 12 prospective businesses committed to creating jobs locally.

Building on this success, in 2012, we launched the [PG&E Summer Jobs Program](#) as a partnership between PG&E and the Boys & Girls Clubs of Fresno County. The program provided more than 200 youth from Fresno's most underserved neighborhoods with nine weeks of career education and job readiness training. Following this training, 55 students earned a paid summer internship. PG&E partnered with the Boys & Girls Clubs of Fresno County, local nonprofit partners and local small-to medium-sized business customers to provide employment opportunities, with student salaries supported through a grant from PG&E.



PG&E and the Boys & Girls Clubs of Fresno County teamed up to provide summer jobs.

Meeting Our Civic Responsibility

In addition to the significant investments we are making in our business, the taxes and franchise fees that PG&E pays are stable sources of revenue that local governments can count on during tight budgetary times.

In 2011, PG&E made franchise fee payments totaling more than \$138 million. PG&E makes these payments to cities and counties for the right to use public streets for its gas and electric facilities. The franchise fees are above and beyond PG&E's [property tax payments](#), which totaled more than \$289 million to 49 counties in 2011.

Future Direction

At PG&E, we recognize that affordable and reliable energy is more important than ever as an enabler of business and employment development in our state.

As part of our enhanced focus on the economic vitality of our customers, we will continue to engage with our many stakeholders to identify opportunities for the future. Future possibilities include:

- Expanding our local presence through community partnerships, strengthened customer support teams and enhanced incentives and tools for customers;
- Building new career opportunities to strengthen the “pipeline” of individuals entering our workforce;
- Leveraging our business operations to better serve our customers and ensure we deliver reliable electricity and gas service;
- Exploring opportunities to increase investment in local and underserved communities; and
- Taking steps to further quantify the economic benefits of our work in the communities we serve so that we can explore opportunities to do more.

Supplier Diversity

As we reshape our operations to deliver safe and reliable gas and electric service to our customers, we are also focused on strengthening local economies and supporting the diverse businesses we count on to help us power Northern and Central California.

For more than three decades, PG&E has been working to bring more women-, minority- and service-disabled veteran-owned business enterprises—or Diverse Business Enterprises (DBEs)—and small businesses into our supply chain. PG&E has developed one of the state’s leading programs, one that supports economic development and job creation in communities we serve by partnering with diverse suppliers to generate innovation and increase competition. In addition, the Utility has played an important role by providing small businesses with technical assistance and capacity building training.



Photo courtesy of First Solar, Inc.

Supplier Diversity and Small Business Results

PG&E’s dedication to supplier diversity is a core part of our business strategy and is an example of our commitment to enhancing economic vitality within our service area. In 2011, PG&E spent \$1.61 billion with diverse suppliers, an all-time record. The spending accounted for 36.6 percent of the Utility’s total procurement budget, exceeding our goal of 34 percent. It capped a nine-year upward trend starting at 18 percent in 2003.

According to the CPUC, the Utility spent more on products and services from businesses owned by minorities, women and service-disabled veterans than any of the more than 30 other utilities and telecommunication companies in California. PG&E’s goal in 2012 is to spend 37.3 percent with diverse suppliers.

We increased our spending in all three DBE categories: spending increased by \$335 million with minority business enterprises, \$120 million with women business enterprises and \$22 million with service-disabled veteran-owned business enterprises.

The table below summarizes our recent supplier diversity performance. It also captures our work with non-DBE small businesses. As with diverse companies, small businesses are a vital source of jobs and economic activity in the communities we serve.

Supplier Diversity and Small Business Results

Category	Utility's 2009 Results (%)	Utility's 2010 Results (%)	Utility's 2011 Results (%)
Minority Men	11.2	14.4	16.7
Minority Women	4.0	5.3	6.4
Minority Business Enterprise	15.2	19.6	23.1
Women Business Enterprise (WBE)	9.1	11.3	11.7
<i>Subtotal Women, Minority Business Enterprise (WMBE)</i>	<i>24.2</i>	<i>31.0</i>	<i>34.7</i>
Service-Disabled-Veteran Business Enterprise (DVBE)	1.3	1.7	1.8
Total WMDVBE	25.6	32.7	36.6
Non-Diverse Small Business Enterprise	6.1	6.3	6.0
Grand Total	31.7	39.0	42.6

Category	2009	2010	2011
Utility's Aspirational Target (%)	25.0	30.0	34.0
Total Diverse Spending (%)	25.6	32.7	36.6

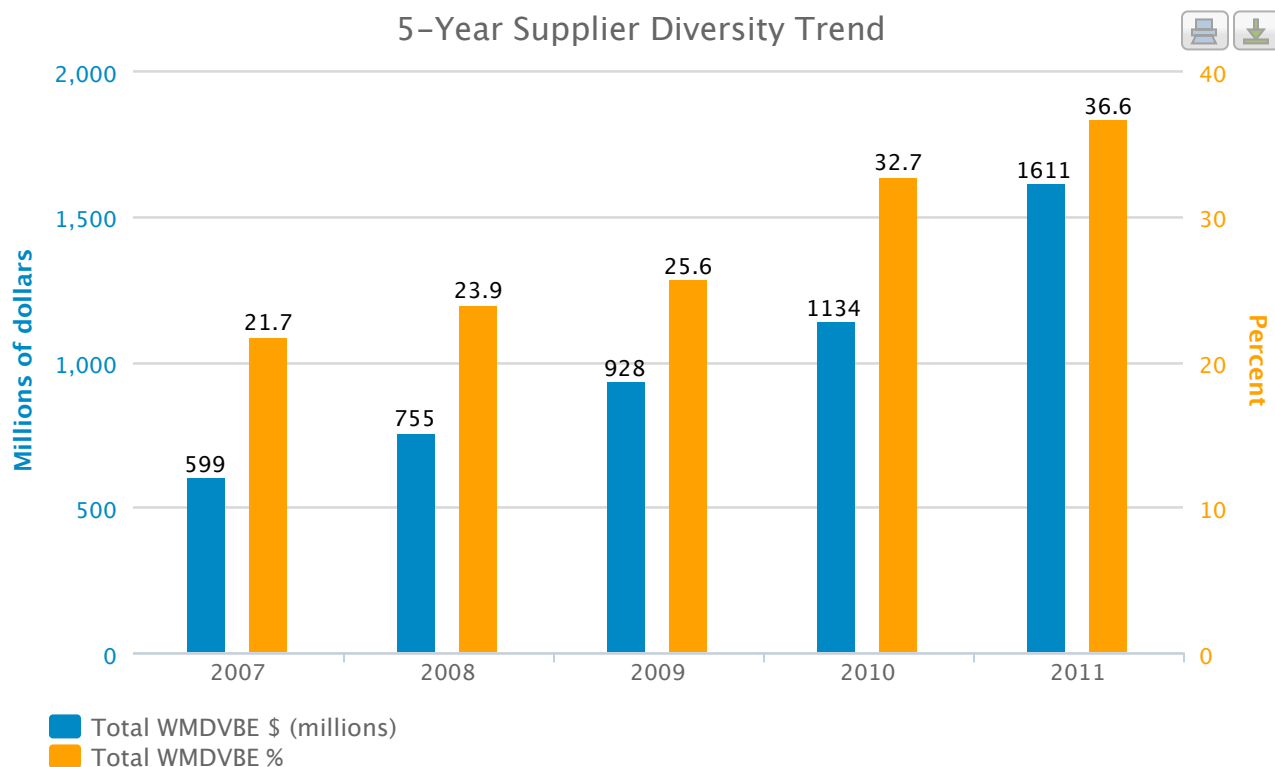
Category	Utility's 2009 Results	Utility's 2010 Results	Utility's 2011 Results
Supplier Diversity Spend	\$928 million	\$1,134 million	\$1,611 million
Non-Diverse Small Business Enterprise Spend	\$220 million	\$219 million	\$264 million
Total Spend	\$1,148 million	\$1,353 million	\$1,875 million

A Growing Commitment

Over the last five years, PG&E has demonstrated a strong and growing commitment to incorporating supplier diversity into its procurement process. While the Utility's total spending on suppliers has increased 60 percent, or \$1.7 billion, during this timeframe, spending on diverse suppliers has nearly tripled, increasing 169 percent or \$1 billion.

In addition, PG&E's spending in every ethnic category has also increased significantly. In particular, our spending with service-disabled veteran-owned businesses (DVBE) reached a record 1.8 percent of the total, a 36.8 percent increase in spending over 2010. We achieved this result through a steadfast commitment to seek innovative ways to include DVBEs in our business. This included convening a cross-functional team to exclusively focus on developing DVBE opportunities. For example, the team worked with a non-diverse

supplier to develop a business solution partnership that resulted in more than \$2 million in new business for a DVBE in 2011.



Overcoming Key Challenges

These results are particularly significant in light of ongoing challenges. PG&E has devoted significant capital toward ensuring the safety of its gas pipelines and additional capital to continue generating energy for customers. The substantial investments required in these major infrastructure plans continue to pose a challenge in that few small or diverse suppliers are large enough to independently handle such projects.

PG&E responded to these challenges by encouraging prime suppliers (direct, non-diverse suppliers) to work collaboratively with diverse suppliers to serve PG&E on such large infrastructure and energy generation projects. The Utility was diligent in working with prime contractors and DBEs to examine the end-to-end supply chain of these projects, seeking the best opportunities for diverse suppliers to serve as subcontractors and business solution partners.

Through these efforts, we were able to increase the Utility's diverse spending in 2011 by \$477 million (or 42.1 percent), as our overall spending increased by \$935 million (or 26.9 percent). This means that more than 50 percent of our increase in spending in 2011 was with diverse suppliers.

Institutionalizing Supplier Diversity within PG&E

We continue to focus on improving our internal business practices to drive results with supplier diversity.

This included working with a network of Supplier Diversity Champions, a group of employees with the responsibility of expanding supplier diversity within our lines of business. Through monthly meetings with senior leadership, these employees set supplier diversity goals, developed strategies, shared best practices and monitored progress toward achieving improved supplier diversity results.

We also increased our employee training and outreach, including publishing an internal newsletter, *Powered by Diversity*, as a way to share supplier diversity best practices and success stories directly with employees.

Strengthening our Supplier Relationships

PG&E's commitment to supplier diversity serves as a catalyst to the growth and expansion of emerging and diverse firms.

A key area of focus is working with our largest prime contractors to engage diverse suppliers in subcontracting opportunities. In 2011, our prime suppliers reported more than \$498 million in spending on diverse subcontractors. We achieved these results by asking prime contractors to set goals and report subcontracting monthly, detailing their progress toward these goals. Executive management also personally communicated with prime suppliers to drive diversity goal achievement. Audits ensured development and growth of our prime suppliers' diverse subcontractors and business solution partners.

Another major area of focus is developing diverse suppliers. For example, in 2011, we sponsored five women and minority business owners for the [UCLA Management Development for Entrepreneurs](#) program. This intensive certificate program enables owners and managers of entrepreneurial businesses to develop management skills and strengthen their ability to build effective organizations.

We also expanded our technical assistance offerings, including [Diverse Suppliers Go Green](#), an initiative focused on training diverse suppliers on ways to establish their own sustainability programs; measure, reduce and report their environmental footprint; and define their green business opportunities. The program featured a Green Policy Statement Contest and a robust online Green Business Toolkit. We also shared a Green Tenant Toolkit, which assists tenants and landlords in reaching sustainability goals within commercial buildings.

Building on this success, we launched Diverse Suppliers Go Global in 2011. This seminar, developed by WE Connect International, educates suppliers on the advantages of evaluating and participating in global supply chains and global markets.

We also continued the first dual International Organization for Standardization (ISO) 9001 and ISO 14001 web-enabled certification program, focused on the competitive advantages ISO quality certification provides for diverse suppliers. In 2011, one of PG&E's woman-owned suppliers achieved certification and four more diverse suppliers expect certification in 2012.

Selected Examples

Since 2009, a Native American family-owned business has expanded its production capabilities to provide quality vehicle fabrication for PG&E's fleet. The company has added 20 employees and more than doubled the size of its manufacturing floor space during this timeframe.

In 2011, PG&E completed a \$250 million [bond transaction](#) with The Williams Capital Group, L.P., a minority-owned investment bank. This was our second bond transaction completed with a minority-owned investment bank as a lead manager.

In 2011, one of our top performing gas and electric construction suppliers, an Asian American-owned firm, doubled its business with PG&E. The company supported our gas transmission leak survey work and will help implement our Pipeline Safety Enhancement Plan.

Building Partnerships, Promoting Diversity

Our utility customers are among the most diverse of any utility in the nation, and when we leverage this diversity by including diverse suppliers in our supply chain, we optimize PG&E's operations.

To do so, PG&E actively engages with a variety of organizations at the local, state and national level to promote supplier diversity. Last year, this included participating in outreach events to meet and promote diverse firms, introduce prime suppliers to the diverse supplier community and learn and share best practices with peer companies.

We also worked to address challenges to diverse businesses in low utilization areas through our active engagement with groups such as the [California Utilities Diversity Council](#), which brings together a broad group of utilities, community organizations and the CPUC on a shared mission to leverage California's diversity resources. Other key organizations include the [National Minority Supplier Development Council](#), the [Elite Service Disabled Veteran Owned Business Network](#) and the [Women's Business Enterprise National Council](#).

We also continued to work with community-based diverse business advocacy organizations to locate diverse suppliers that can work with PG&E as direct contractors and subcontractors.

Earning Recognition

PG&E Corporation and Pacific Gas and Electric Company earned recognition from an array of supplier diversity stakeholders and supporters in 2011:

- *DiversityInc*—ranked eighth on the “Top 10 Companies for Supplier Diversity” list and ranked second on the “Top Five Regional Utilities”
- *Hispanic Business*—named among the magazine's “Diversity Elite 60” for the seventh time
- *Women's Business Enterprise National Council*—named one of America's Top Corporations for Women's Business Enterprises
- *Northern California Minority Supplier Diversity Council*—named “Corporation of the Year”
- *Edison Electric Institute*—presented the “Supplier Diversity Excellence” award for outstanding leadership
- *Diversity Careers*—selected as Readers Pick for Best Supplier Diversity Company
- *US Pan Asian American Chamber of Commerce*—named “Corporation of the Year”

[Review additional recognition for diversity and inclusion.](#)

Planning for the Future

In 2012, we plan to continue expanding our technical assistance program by introducing a new training program, “Diverse Suppliers Are Safe,” an initiative focused on enhancing safety within the work

environment. In addition, PG&E will continue to expand its focus on supplier development.

PG&E is also co-founder of the University of California's Advanced Technology Management Initiative. The program, launched in 2012, will prepare diverse suppliers for participation in emerging technologies, such as those already being used to build a more intelligent electric grid. PG&E will provide annual scholarships to this graduate-level program.

Building Career Pathways

PG&E plays an important role fostering economic vitality and building career opportunities within the communities we serve. Our workforce development strategy is to look for industry-driven needs, engage in public-private partnerships that share our level of commitment and emphasize underserved communities in our outreach to build a skilled, diverse and qualified talent pool.



Rising to the Challenge

According to the [National Commission on Energy Policy's Task Force on America's Future Energy Jobs](#), the energy industry faces a critical shortage of trained professionals to maintain the existing electric power system and to design, build and operate the energy systems of the future.

Estimates show that by the end of 2013, as many as 40 percent of electric utility employees will be eligible for retirement. In addition, the industry will have to replace about 58,000 skilled craft workers and 11,000 engineers, while adding 150,000 skilled craft workers over the next decade to accommodate massive infrastructure and technology investments.

PG&E forecasts that more than 40 percent of its workforce will become eligible for retirement within the next five years. These expected retirements include the ranks of workers needed to build, operate and maintain our vital infrastructure, creating new opportunities for those interested in utilities and energy sector careers.

There is no single solution to building and sustaining the skilled and qualified workforce PG&E needs to thrive in the long-term. Meeting this challenge requires taking a holistic, integrated approach.

One important area of focus is recruiting and training new, talented employees to join our workforce, and we are taking a multi-faceted approach to doing so—conducting targeted outreach, building partnerships with diverse organizations and creating a pipeline of prospective employees through strong partnerships with universities and community colleges.

Skills for 
America's Future

Recognition by the White House and a partnership with The Aspen Institute's Skills for America's Future has distinguished our efforts in workforce development as a best practice for the utilities industry.

Complementing these efforts, our multi-faceted recruiting strategy involves extensive community outreach and collaboration with organizations around the country. In 2011 alone, our recruiting staff attended more than 90 events, giving potential candidates the opportunity to meet our employees and learn first-hand about PG&E. In addition, we utilize LinkedIn and Facebook to advertise opportunities and source candidates.

We also offer [summer internships](#) and [entry-level engineer and other rotational programs for new college graduates](#) to introduce young professionals to new work experiences and career development opportunities.

Partnering through PowerPathway™

PG&E’s PowerPathway™ is a core component of our workforce development strategy—a model that enables PG&E to help California produce the skilled and diverse workers needed by PG&E and the energy and utilities industry.

[The PowerPathway™ Training Network](#), which includes partnerships with 24 public community colleges and universities, focuses on cultivating career pathways that strengthen community access to and employee progression into new energy jobs. For example, the program recently kicked off an [Energy Workforce Sector Strategy](#), the first step in getting alignment and coordination around the creation of commercial business energy-efficiency jobs.

Key accomplishments of the network in 2011 included:

Through PowerPathway™, PG&E partnered with the [Center for Energy Workforce Development](#) on a commitment to the [Clinton Global Initiative America \(CGI America\)](#) to contribute to the national rollout of energy literacy curriculum into high school science, technology, engineering and mathematics frameworks across California.

Training Network	2011 Highlights
Skilled Crafts	<ul style="list-style-type: none">■ Graduating more than 240 students from 10 Bridge to Utility Worker programs, including 150 military veterans. Nearly 60 percent of the students were diverse. Additionally, about 60 percent of the graduates were hired into PG&E or the energy industry. PG&E employs graduates in positions such as gas and electric construction utility worker, power plant technician, gas service representative, communication technician and equipment operator.■ Completing a fourth year of the Capstone to Utility Welding program at Butte College in Chico from which PG&E has consistently hired 6 to 10 apprentice welders each year.■ Completing a second year of the Certificate in Electrical and Power Systems at the College of San Mateo from which PG&E and other employers source apprentice electrical technician positions.
Clean Tech Vehicles	<ul style="list-style-type: none">■ Completing training for PG&E’s fleet mechanics on hybrid vehicle repair and maintenance. After receiving instruction from a PG&E master mechanic, the newly trained faculty of seven community colleges taught the same curriculum to 225 PG&E fleet mechanics.■ This approach lowered PG&E’s operational costs and expanded the community college system’s capacity to teach the curriculum to others.
Energy Efficiency and Renewables	<ul style="list-style-type: none">■ Launching a graduate-level Certificate in Integrated Energy Solutions at California State University, East Bay on the fundamentals of energy efficient building engineering,

Training Network	2011 Highlights
	<p>sustainable construction practices and integrated energy efficiency solutions.</p> <ul style="list-style-type: none"> ■ Launching a course in Energy Efficiency Business Development at the Workforce Institute (a division of San Jose/Evergreen Community College District) on energy industry fundamentals and energy solutions sales and service.
Engineering and Smart Grid	<ul style="list-style-type: none"> ■ Building a coalition of Bay Area community colleges to commit to developing a graduate-level curriculum on Smart Grid Power Engineering. ■ Launching statewide market research to define the range of occupations impacted by the Smart Grid and skills needed.

Building Career Pathways for Line Workers

Working closely with the IBEW, PG&E launched a new effort in 2011: [the pre-apprentice line worker program](#). This initiative illustrates our commitment to preparing our workforce for success and serves as a model for the way we approach training.

To develop the program, we formed a joint Utility and union committee and sought extensive input from employees. We also conducted industry benchmarking, research and site visits with other utilities to identify best practices. Candidates receive formal training and assessments; those who complete the one-year probationary program will become apprentice linemen, the beginning of a multi-year apprenticeship. We expect to hire up to 60 new pre-apprentice linemen in 2012.

PowerPathway™ complements PG&E's training capacity as our organization strives to build and sustain a skilled and qualified workforce. For example, in alignment with the pre-apprentice lineworker program, PowerPathway™ created a Pole Climbing Capstone course to help foster diverse candidates with more rigorous pole climbing training experience. As part of the course, students will be offered 120 hours, or three weeks, of pole climbing instruction.

Adding this course to the roster of PowerPathway offerings enables PG&E to continue to support lineworker candidates for the energy and utilities industry. The first course was offered in 2012 at PG&E's newly constructed pole climbing training facility in Oakland, California.

Students qualify to enroll in the Pole Climbing Capstone course after completing a Bridge to Utility Worker training prerequisite.

Focusing on Veterans

PG&E recognizes the valuable skills and perspectives veterans of our armed forces can offer companies looking for qualified employees to replace an aging workforce. In fact, recruiting veterans is a focus for PG&E, which hired 225 veterans in 2011 or about 7 percent of our total hires.

Pacific Gas and Electric Company is one of five utilities taking part in [Troops to Energy Jobs](#), an initiative launched by theCenter for Energy Workforce Development to build national awareness among retired

or exiting military personnel on opportunities available in the utilities sector that match skills learned during military service.

Additionally, PG&E is taking steps to recruit and assist military members as part of its PowerPathway™ Bridge to Utility Worker programs. Through 2011, PowerPathway™ conducted six courses serving only recently discharged veterans.



PG&E assists with the [Transition Assistance Program](#), a Department of Defense program that provides career coaching and tools for returning veterans. PG&E also works with organizations such as [ProjectHIRED](#), a nonprofit that helps veterans with disabilities find jobs.

Within PG&E, the Utility has quickly grown a veterans' Employee Resource Group, which is open to all employees regardless of veteran status, as well as honorary membership to PG&E retirees and family members of the military. The group began last fall with five members and now numbers more than 100.

Looking Forward

With a large number of eligible retirees, PG&E's workforce development efforts will focus on aligning with the PG&E's mid- and long-term hiring and talent pipeline needs.

PowerPathway™ will continue to offer and build out post-secondary career pathways through our four training networks. One area of focus will be expanding our existing curriculum and programs across PG&E's service area to provide more training locally. Additionally, PG&E will leverage the Energy Sector Workforce Strategy to explore new training opportunities and work to embed programs into the standard course of study that colleges and universities offer.

PowerPathway™ will also expand its offerings through partnerships with community-based workforce training providers with a continued emphasis on training veterans and a growing focus on bringing more women into the utility workforce.

In partnership with the Center for Energy Workforce Development, PG&E will continue to collaborate with high schools, community colleges and the workforce investment system to implement [Get Into Energy Career Pathways](#) to increase career awareness of energy and utilities careers. PG&E also plans to engage stakeholders across the utilities sector value chain such as suppliers and customers with the goal of increasing the number of employers that provide career opportunities to PowerPathway graduates.

By leveraging our partnerships across the state and industry, we will collaborate to build a more skilled, diverse and qualified workforce to sustain the changing landscape of the energy and utilities industry.

Helping Customers in Need

Despite signs of improvements to the economy, many families across California are still struggling to make ends meet. To help our customers, we offer a wide range of options—rebates for energy efficiency products, financial assistance programs like CARE and REACH, and the introduction of the “Green Button,” which allows customers to download their personal energy use data to better understand how they can save money.



PG&E’s wide array of [energy efficiency](#) programs, from instant savings on lighting products to incentives for more efficient appliances, help customers save money by reducing the amount of energy they use in the first place.

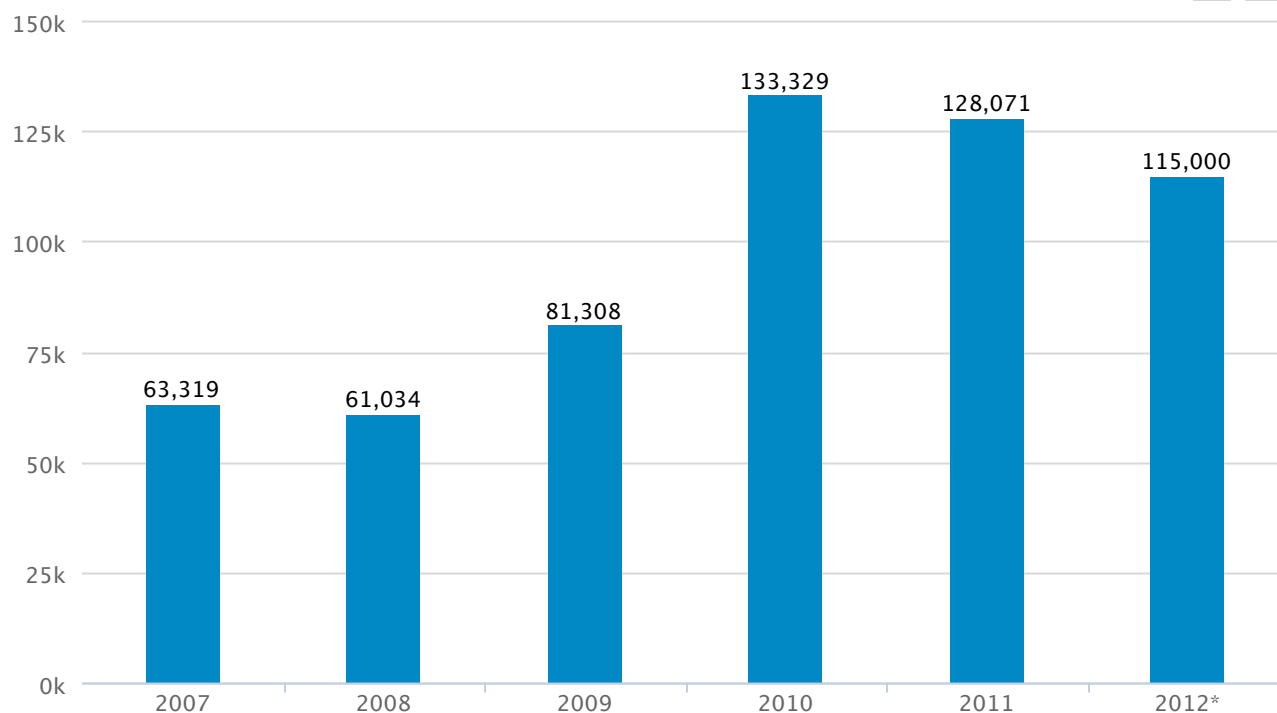
We are also [working to assist customers](#) when there are challenges or unexpected changes in their financial situation. We have continued our efforts to enroll eligible customers in the long-standing [CARE program](#), which provides a monthly discount on energy bills for income-qualified households and housing facilities.

In 2011, we enrolled customers via outbound phone calls, door-to-door canvassing, online enrollment and direct mail projects. We also partnered with 180 community organizations to reach customers across 48 counties and participated in more than 100 outreach events including job, health and community fairs. In 2011, nearly 400,000 new customers enrolled in the CARE program, bringing the total to more than 1.5 million customers, or more than 90 percent of eligible participants, exceeding the CPUC’s enrollment goal.

Qualified households may receive an average annual discount of \$600. Since the program’s inception in 1989, PG&E CARE customers have saved more than \$5 billion on their energy bills.

[Our Energy Savings Assistance Program](#) provides income-qualified renters and homeowners with free energy education, weatherization measures and energy-efficient appliances to reduce gas and electric usage. Through the program, certified contractors make home improvements such as installing compact fluorescent lights, providing weather stripping, installing showerheads and performing other minor home repairs, concluding with a home safety inspection. In 2011, we treated more than 128,000 homes, exceeding our goal for the year.

Weatherized Homes Through Energy Savings Assistance Program



*Projected

Additionally, [Balanced Payment Plans](#) continued to provide an optional free bill payment plan designed to eliminate swings in customers' monthly energy bills, such as when seasonal changes occur.

And residential pricing plans enabled by [SmartMeter™ technology](#) are helping customers better control and reduce energy costs. The [SmartRate™ Summer Pricing Plan](#) enables customers to save money by conserving power during up to 15 SmartDays™ each summer, when energy may be in short supply. More broadly, time of use rates enable customers to save money by reducing and shifting some of their usage to off-peak periods. By year-end 2011, more than 22,000 customers were enrolled in the SmartRate™ Summer Pricing Plan.

We also once again offered a [Winter Gas Savings Program](#), rewarding residential and commercial customers who reduced natural gas consumption during the winter (compared to their past usage) with a credit on their gas bills after the program period.

About 80,000 customers logged on to use PG&E's new Facebook-enabled Winter Gas Savings Progress Tracker application that, leveraging SmartMeter™ technology, [allowed them to follow their progress toward earning a rebate online and adjust their behavior accordingly](#). In fact, those who logged on saved 23 percent more gas than other customers. In 2012, nearly 2 million customers received credits totaling more than \$41 million.

Additionally, for more than 25 years, the [REACH Program](#) has provided emergency energy assistance to low-income families within PG&E's service area. This one-time energy assistance program, funded with charitable dollars from PG&E's shareholders, is administered by The Salvation Army. The program provides assistance of up to \$200 to customers experiencing a crisis that prevents them from paying their gas or

electric bill.

Last year, thanks to additional federal funding, PG&E expanded REACH to create the REACH Plus program, which helped more than 8,700 families in 2011. The traditional REACH program assisted more than 4,500 customers in 2011. Together, PG&E and its customers provided more than \$4 million to help more than 13,200 customers through the REACH and REACH Plus programs in 2011.

Facing the summer heat, communities across the state once again opened cooling centers last year, many available in large part due to financial support from PG&E. Over the past four years, PG&E has provided \$220,000 in grants to help fund these pre-existing centers from San Jose to Kern County. The number of centers we have helped fund has also increased from six centers in 2007 to 12 in 2011.

The centers, many located in local government-run senior centers or neighborhood parks and recreation sites, help fill a critical need for those who may not have the financial means to cool and shelter themselves from dangerous and prolonged high temperatures. Financial support from PG&E helps cover staffing and extended hours at the centers, allowing them to remain open late and on weekends so people can relax in air-conditioned buildings.

Environment

Our goal of environmental leadership is rooted in a fundamental commitment to compliance with the many environmental requirements that govern our business. PG&E is also building on our decades-long commitment to pursue new thinking and partnerships that lessen our environmental footprint and enhance our ability to serve as responsible stewards of the environment.

We are planning for the future through expanded supplies of renewable energy, reducing the environmental footprint of our buildings and fleet, and promoting greener operations throughout our supply chain. And we continue to pioneer new ways to help customers put energy savings at their fingertips.

Key Sustainability Indicators

● = meets or exceeds target ● = below target ● = substantially below target

2011 Target	Progress	2011 Result	2012 Target
Environmental Compliance			
Reduce the number of Notices of Violation (NOVs) to 7	●	10 NOVs	N/A ¹
Reduce the rate of NOVs per 100 agency inspections to 0.86	●	1.41 NOVs per 100 agency inspections	N/A ²
Buildings and Operations			
Additional 4.2% reduction in energy use at 168 sites ³	●	4.8% reduction	Additional 3.0% reduction at 168 sites
Additional 5.7% reduction in water use at 125 sites ⁴	●	6.0% reduction	Additional 2.0% reduction at 135 sites
Achieve 55% waste diversion rate at 48 sites for administrative waste	●	59.5% diversion rate	Achieve 73% waste diversion rate at 48 sites for all waste ⁵
Retrofit 2,090 utility poles, making them "bird-safe"	●	1,885 utility poles	2,050 utility poles
Clean Energy			
Meet California's Renewable Portfolio Standard (an average of 20% over the 2011 to 2013 period)	●	19% from PG&E-owned facilities or contracts	Meet California's Renewable Portfolio Standard (an average of 20% over the 2011 to 2013 period)

¹ Starting in 2012, we will report Environmental Enforcement Actions, which will include all written compliance sanctions issued by a regulatory agency, including NOVs, that result in an actual or potential impact to the environment.

² Starting in 2012, we will report the percentage of inspections of our facilities and projects by a regulatory agency that do not result in a written sanction.

³ Energy use is measured in MMBTUs and the sites include offices and service yards.

⁴ Water use is measured in gallons and the sites include offices and service yards.

⁵ The waste metric methodology was updated in 2011 to measure the diversion rate in the final quarter of each year rather than the diversion rate over the full calendar year. In 2010 and 2011, we measured the waste produced by the buildings (administrative waste); in 2012, we expanded the scope to include all non-hazardous municipal waste at office facilities and service yards.

Compliance

As we sharpen our focus on the basics of our business, we recognize the fundamental importance of maintaining compliance with all federal, state and local environmental laws and regulations. Doing so is essential to providing safe and reliable gas and electric service and to meeting our goal of environmental leadership.

In fact, our **environmental policy** begins with a commitment to “comply fully with the letter and spirit of all applicable environmental laws and regulations.”



Governance and Management Structure

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; properly transporting, handling, storing and disposing of hazardous wastes; protecting threatened and endangered species; and reporting and reducing carbon dioxide and other greenhouse gas emissions.

In 2011, Pacific Gas and Electric Company named a Vice President of Environmental to oversee our commitment to meet—and strive to exceed—these requirements. The new department consolidates the Utility’s environmental policy, environmental permitting and compliance, land management and remediation functions into one organization. PG&E also established an Environmental Officer Steering Committee to provide oversight on environmental issues across PG&E.

To maintain our focus on high-priority work, PG&E employs a variety of governance practices and processes. Operational controls are critical so that actions to meet the Utility’s environmental compliance obligations are performed on time, on purpose and are repeatable. We are also continuously learning from our experience and integrating these lessons back into our work processes and staff development.

Compliance performance updates are reviewed monthly by all PG&E officers. In addition, an annual environmental compliance summary is presented to the Public Policy Committee of the PG&E Corporation Board of Directors.

PG&E’s gas and electric operations and maintenance departments completed significant work last year to improve the reliability and capacity of our system, and a number of these projects required environmental permits. To support this important aspect of our business, we added personnel to oversee environmental compliance and strengthened our “release to construction” process to better ensure that environmental permits were in place and understood prior to construction.

We have also enhanced our measures of compliance performance—moving to new metrics that are more comprehensive and will help drive further improvements across our business. Starting in 2012, we will be tracking and reporting all written compliance sanctions issued by a regulatory agency, as well as the percentage of inspections performed without a citation.

Environmental Management System

The Utility has an Environmental Management System (EMS) that is modeled after the ISO 14001 environmental management standard. While the Utility has not obtained ISO 14001 certifications for its facilities, PG&E has performed an independent third-party gap analysis relative to the ISO 14001 standard to create an EMS enhancement plan.

This EMS enhancement plan incorporates a comprehensive review of our aspects and impacts by each line of business. In 2012, we will work with each operational line of business to develop specific environmental goals and objectives based on those results—ensuring that we have appropriate management plans in place for areas with the largest potential impacts to the environment. This process will be overseen by the Environmental Officer Steering Committee.

In 2011, we completed a series of process improvements for operating drinking water systems, continued implementation of our [San Joaquin Valley Operations and Maintenance Habitat Conservation Plan \(HCP\)](#) and maintained our focus on environmental permitting and compliance management for large operation, maintenance and construction projects. This included a focus on construction storm water permitting in light of new requirements that went into effect in mid-2010.

We also continued to roll out an enterprise compliance tracking system (ECTS) to clarify roles and responsibilities for environmental tasks at the facility level. We have implemented the system at more than 80 service centers, with the remaining service centers to be completed in 2012, along with major electric transmission facilities.

To further improve performance and minimize risk, we began a new initiative to provide a “one-stop shop” for managing environmental permitting and compliance for construction projects. Currently in the pilot stage, this new project management system will allow all environmental permits to be tracked in one location, allowing for more streamlined permit processing. We are also continuing our efforts to develop programmatic and regionally based regulatory agreements such as HCPs and regional discharge permits for hydrostatic testing of our gas pipelines.

In 2011, PG&E hydrostatically tested 163 miles of pipeline running through densely populated areas and we plan to test hundreds of additional miles over the next several years. These tests, where pipe segments are taken out of service and isolated so that water can be inserted and pressurized for extended periods, are intended to verify the safety and reliability of the natural gas transmission system. PG&E’s environmental team is engaged throughout the process to ensure appropriate management of the water used in the testing and, more generally, to minimize or avoid environmental impacts.

Training

Training continues to be a key element of the Utility's compliance program. In 2011, we developed and delivered a range of general awareness, work activity and task-specific environmental compliance training to employees throughout our business. These training sessions were delivered through a combination of computer-based, instructor-led and short "tailboard" sessions and covered a range of topics—from cultural resources to hazardous materials management.

In 2011, the Utility provided more than 16,000 training sessions to employees to meet their environmental compliance obligations based on the business operations they perform. Some of this training fulfilled programmatic permit requirements, such as sessions for approximately 1,700 employees on the San Joaquin Valley Operations and Maintenance HCP last year. In addition to these recorded trainings, we provided activity- and resource-specific trainings to our crews at active construction projects.

We also developed numerous job aids on specific environmental requirements for front line supervisors to share with employees in the field.

Verifying and Auditing Our Performance

A robust environmental auditing program is key to ensuring that the Utility is effectively complying with the many environmental laws and regulations relating to our business. The Utility reviews and audits environmental performance in three different ways—self-assessments, comprehensive reviews and internal audits:

- **Self-Assessments:** Environmental personnel perform self-assessments on facilities or projects under their responsibility. An assessment evaluates a facility or project on compliance with environmental regulations.
- **Comprehensive Reviews:** These reviews are performed by personnel from the Environmental Department who are not responsible for compliance at the facility or project being inspected. A comprehensive review involves evaluating all environmental compliance obligations associated with a facility's or project's operations.
- **Internal Audits:** The Internal Audit Department conducts systemic and programmatic controls-based audits to independently analyze the effectiveness of the Utility's environmental compliance management systems. The results of these audits are reported annually to the PG&E Corporation and Utility Audit Committees of the Boards of Directors.

During 2011, we performed a combination of 809 self-assessments, comprehensive reviews and internal audits of various environmental processes, facilities and projects, compared to 716 in 2010.

We conducted 59 audits (system audits and comprehensive facility reviews) in 2011, up from 32 in 2010. This increase is due, in part, to an increase in comprehensive reviews conducted at our Shared Services facilities.

Corrective Actions

We continue to use Lean Six Sigma methodology to improve our programs—clearly defining, streamlining and documenting processes to improve compliance, consistency and effectiveness.

Whenever we receive an NOV, we conduct a root cause analysis, which results in a corrective action plan. We emphasize the importance of completing the root cause analyses and implementing the corrective action plans in a timely manner and track progress through department-specific metrics.

We also review all regulatory findings across our business to look for trends and opportunities for improvement. For example, one root cause analysis indicated a gap in roles and responsibilities for the maintenance of emergency generators, which we promptly resolved.

Operational Performance

PG&E tracks and reports annual environmental compliance performance indicators across a broad spectrum. This section details our performance results for 2011.

Importantly, starting in 2012, we have changed the way we track and report compliance findings from regulatory agencies. In prior years, we tracked the number of Notices of Violation (NOVs) issued by a regulatory agency. Now, we will track all written compliance sanctions issued by a regulatory agency, including NOVs. We will categorize all written sanctions as “Level 1” (those findings that resulted in an actual or potential impact to the environment) and “Level 2” (findings that did not result in an actual or potential impact to the environment).

Also starting in 2012, we have changed the way we track and report the rate of compliance issues. In prior years, we tracked the number of NOVs per 100 inspections by a regulatory agency. Now, we will track the percentage of inspections of our facilities and projects by a regulatory agency that do not result in a written sanction. In 2011, we achieved a rate of 85 percent inspections without a written sanction; our 2012 goal is 90 percent.

Reported Releases and Permit Exceedances

The Utility reported a total of 242 releases in 2011, a decrease from 246 reported in 2010. A release is defined as an unintentional discharge of a regulated substance that exceeds a reporting threshold. The Utility reports releases that both meet and fall below regulatory thresholds in an effort to ensure operational transparency to local agencies. A large percentage of these releases involved small amounts of mineral oil used in transformers or other petroleum-based substances. The Utility maintains emergency response procedures to provide employees and contractors with the tools needed to respond effectively.

PG&E reported one permit exceedance in 2011, the same number as 2010. An exceedance is defined as a discharge in excess of what is allowed by a permit. The exceedance occurred during a discharge to the City of San Jose's sewer system during a gas pipeline hydrotest and involved an exceedance of the permitted mercury limit. The exceedance was reported to the City of San Jose's Environmental Services Division.

Agency Inspections

A total of 710 agency inspections occurred in 2011, including 542 facility and 168 field project inspections. The number of facility inspections decreased from 819 in 2010. The majority of these inspections were performed by certified Uniform Program Agencies, such as city and county environmental health departments and fire departments. The remainder of the inspections was performed by agencies such as air quality management districts, the California State Lands Commission and the CPUC.

Enforcement Actions—Notices of Violation

The number of NOVs received during 2011 was ten, an increase of two from 2010. Of the ten NOVs, two were self-reported by the Utility to the governing agency. The rate of NOVs per 100 agency inspections in 2011 increased to 1.41 from 0.98 in 2010.

Five NOVs involved air quality regulations, including a missed test on a pipeline liquids storage tank, two errors on equipment specifications listed in permits, equipment operating over its permitted hours and a nuisance allegation from a gas venting operation.

The remaining five citations involved nitrates in drinking water in Hinkley, a timber harvest plan violation, trees trimmed in a riparian area without a permit, an inadequate storm water pollution prevention plan implementation at our Humboldt Bay Generating Station and the previously-mentioned sewer discharge that exceeded permitted levels of mercury.

2011 Enforcement Penalties and Settlements

In 2011, the Utility paid settlements and penalties stemming from five environmental enforcement actions, resulting in monetary penalties totaling \$32,378.

Compliance Data	2009	2010	2011
Notices of Violation (NOVs)	21	8	10
Rate of NOVs (per 100 inspections)	3.82	0.98 ¹	1.41
Releases/Exceedances	227	247	243
Penalties Paid	\$3,646	\$39,882	\$32,378
Agency Inspections	550	819	710
Audits Performed (System Audits and Comprehensive Facility Reviews)	75	32	59
Self-Assessments Performed	663	684	750

¹ In 2010, the Utility began tracking government agency inspections that occur on gas and electric transmission capital projects in field locations. This figure is added to the number of agency inspections at facilities to produce a more comprehensive total number of agency inspections.

Planning for California's Clean Energy Future

To meet California's growing demand for electricity, the state benefits from a "loading order" of preferred energy sources originally adopted by the California Energy Commission and Public Utilities Commission in the state's 2003 [Energy Action Plan](#).

This state-wide comprehensive energy strategy emphasizes an aggressive expansion of customer energy efficiency and demand-side management programs and looks to secure additional renewable power resources before meeting remaining energy needs through efficient traditional generation sources. The loading order serves as the foundation for energy policies and decisions to develop and operate California's electricity system in the best, long-term interest of the public, including PG&E's customers.



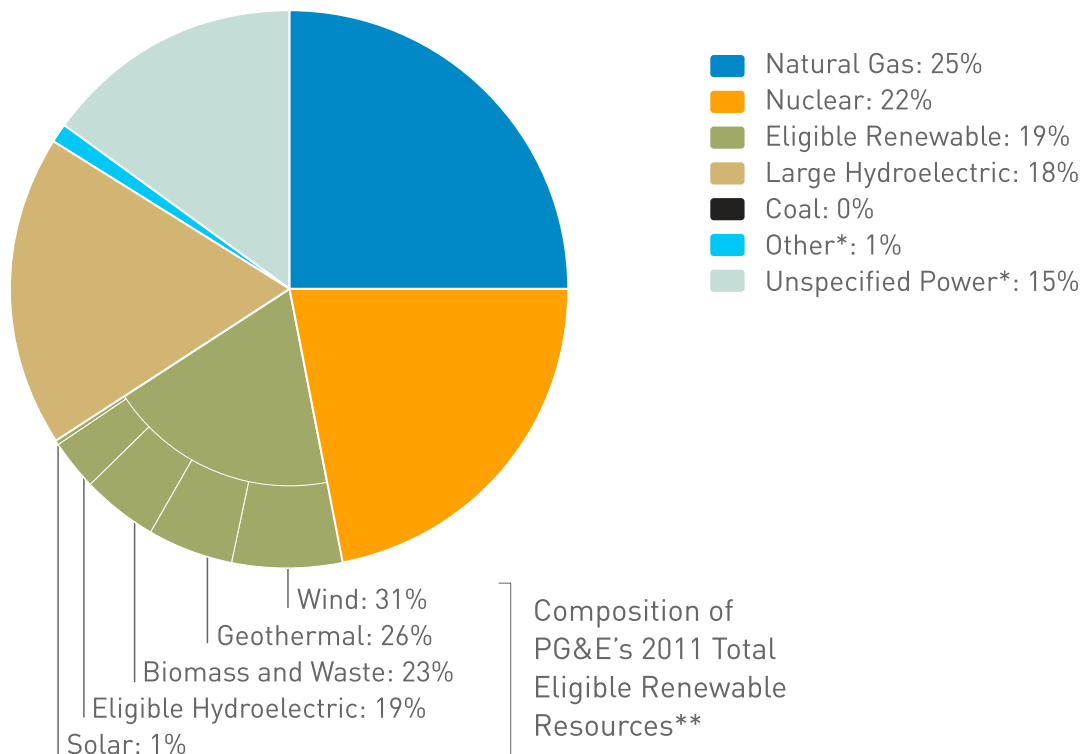
Photo courtesy of enXco, Inc.

PG&E's 2011 Electric Power Mix

In 2011, PG&E's retail customers used 74,864 GWh of electricity. Of that amount, 35,351 GWh were generated by PG&E's own natural gas, hydroelectric and nuclear facilities, as well as small amounts of fuel oil, diesel and solar energy. The remainder was purchased from third-party generators, via either contracts or the open market.

The chart below shows our overall electricity supply mix for 2011, which included both the energy PG&E generated and the energy PG&E purchased from third parties.

PG&E's 2011 Electric Power Mix Delivered to Retail Customers



* "Other" includes diesel oil and petroleum coke (a waste byproduct of oil refining) and "Unspecified Power" refers to electricity generated that is not traceable to specific generation sources by any auditable contract trail.

** 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.

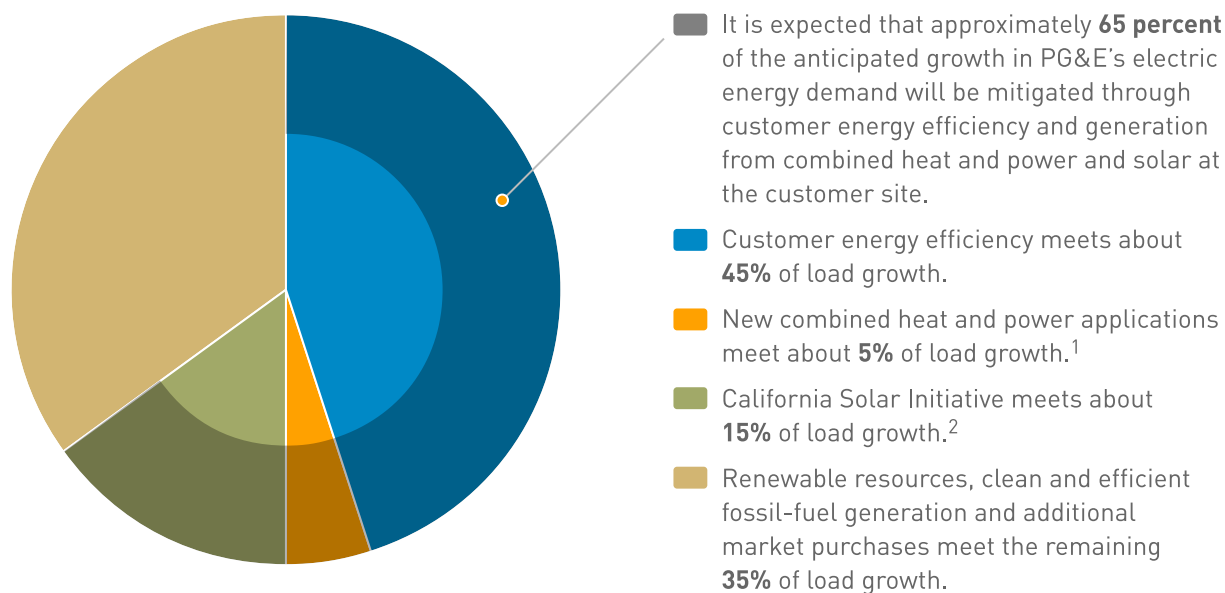
PG&E's Long-Term Procurement Plan

PG&E procures resources to meet its customer electricity needs based on a long-term procurement plan approved by the CPUC.

In preparing its plan, PG&E follows the "loading order" and puts first priority on reducing consumption through [energy efficiency and demand-side resources](#), then [renewable generation](#), and finally [clean conventional electric supply](#).

For example, between 2012 and 2020, forecasts show PG&E meeting approximately 65 percent of the anticipated demand growth in its service area through energy efficiency and generation from combined heat and power and solar at the customer site. As a result, electricity sales would grow at an average rate of just 0.7 percent per year between 2012 and 2020; in the absence of these programs, electricity sales would grow at an average rate of 2 percent per year.

Composition of Projected Energy Load Growth Met by Demand-Side Resources, 2011 – 2020



¹ PG&E's combined heat and power (CHP) forecast is based on historic installations.

² PG&E recognizes that there is a great deal of uncertainty in any forecast of distributed generation installations. While costs of solar generation have dropped dramatically, the [California Solar Initiative](#) program incentives have declined as well. The [Self-Generation Incentive Program \(SGIP\)](#) will include CHP incentives, but funding is limited. Additionally, the [feed-in-tariff \(FIT\) for CHP](#) up to 20 MW is expected to result in some generation that offsets customers' usage, but the tariff was only recently implemented. It is expected that the efficiency requirements of both the CHP FIT and the SGIP program might act as market barriers to CHP installations.

Demonstrating Fuel Cell Technology



Photo of 1.4 MW fuel-cell on the campus of Cal State-East Bay.

As part of an effort to demonstrate and advance fuel cell technology, PG&E joined with university officials, regulators, local elected officials and others to [dedicate a 1.4 MW fuel-cell power plant](#) on the campus of Cal State—East Bay last year. While the fuel cell plant is not an eligible renewable resource, it is a low emission, innovative technology.

The plant, which is owned and operated by PG&E, converts hydrogen from natural gas and oxygen from the air into electricity. The stationary facility operates 24 hours a day and also generates heat used on campus. The plant provides enough electricity for about 1,400 homes and is used to heat some buildings and two swimming pools on the university's campus, with projected energy savings of \$160,000 a year.

Students use the facility as a learning lab; additionally, a touch-screen information kiosk offers a detailed description of what a fuel cell is and how it works and shows how much power has been generated by the facility.

PG&E also has a 1.6 MW fuel-cell power plant in operation on the campus of San Francisco State University.

Renewable Energy

PG&E is actively expanding renewable energy supplies for our customers—investing in a range of clean energy resources such as solar, wind, geothermal, biomass and small hydro. We use a variety of approaches to do so, including using competitive solicitations to procure renewable energy from third-parties and developing and owning renewables projects ourselves.

By working collaboratively with regulators, environmental organizations and other stakeholders, we can develop a meaningful policy framework, encourage technology development, increase access to financing and take other important steps that will allow us to achieve California's ambitious renewable energy goals. Our objective is to achieve these goals in a manner that adequately contains costs for our customers.



Photo courtesy of First Solar, Inc.

Progress Toward California's Renewable Energy Targets

California's Renewable Portfolio Standard (RPS) requires the state's investor-owned utilities, publicly-owned utilities, energy service providers and community choice aggregators to deliver 33 percent renewable energy by the end of 2020. This important target is measured by the percentage of total retail sales that come from eligible renewable resources.

The 33 percent RPS was signed into law by California's governor in 2011, replacing a 20 percent RPS program. To meet this expanded target, PG&E and other retail sellers may use a flexible "stair step" approach of increasing targets that ultimately climb to a 33 percent annual requirement. Renewable deliveries must equal 20 percent on average during 2011 to 2013, about 23 percent on average during 2014 to 2016 and about 30 percent on average during 2017 to 2020. PG&E must then deliver 33 percent of its electricity from RPS-eligible resources each year after 2020.

PG&E is fully committed—and is well on the way—to meeting this mandate. By the end of 2011, 19 percent of the electricity we delivered to our customers came from RPS-eligible resources. The majority of this total came from contracts with third-party renewable energy companies.

PG&E supports the use of renewable energy while recognizing that increased deployment of renewables presents risks, including cost impacts and operational challenges related to the integration of renewables into the grid. Accordingly, we strongly advocate for RPS policies that help mitigate these risks to provide

flexibility and help minimize costs to our customers.

Contracting for Renewable Energy

PG&E sources most of its renewable energy through contracts with third parties. In 2011, the Utility added seven new long-term contracts to its portfolio of renewable energy supplies through targeted solicitations and bilateral negotiations.

These contracts represent more than 700 MW of wind and solar resources. Overall, PG&E has contracted for more than 10,000 MW of RPS-eligible energy since the start of California's RPS program in 2002, including more than 9,900 MW contracted through the end of 2011. Approximately 2,800 MW of these are currently delivering to PG&E and an additional 4,700 MW are under development.

To pursue contracts with third-parties, PG&E held three separate solicitations for renewable power resources in 2011:

- We issued our annual [Request for Offers \(RFO\)](#) for [renewable power](#) and received a strong response. We are currently executing contracts resulting from this solicitation that offer the best value, viability and fit and will file them with the CPUC for approval.
- We issued our first [Renewable Auction Mechanism RFO](#) for renewable power from projects up to 20 MW in size. As a result, PG&E executed four contracts in early 2012 that will provide more than 60 MW of renewable power from geothermal, wind and solar resources.
- We held our first [RFO for solar photovoltaic \(PV\)](#) generation as part of our five-year program to contract for up to 250 MW of new solar PV. The [solicitation](#), which sought moderately sized solar PV projects, resulted in [three contracts totaling 50 MW](#).

The seven contracts signed in 2011 include:

Renewable Portfolio Standard—Contracts Signed in 2011¹

Project (Name)	Counterparty	Location (City)	Location (State)	Technology	MW	GWh/Year
PV1 ²	Westlands Solar Farms	Huron	California	Solar Photovoltaic	18	36
Orion Solar ²	Fotowatio Renewable Ventures	Unincorporated Kern County	California	Solar Photovoltaic	12	28
Mojave Solar Project ³	Abengoa Solar	Harper Lake	California	Solar Thermal	250	617
Copper Mountain II	Copper Mountain Solar 2, LLC	Boulder City	Nevada	Solar Photovoltaic	150	303
Shiloh IV Wind Project	enXco, Inc.	Rio Vista	California	Wind	100	269
Kansas South ²	Recurrent Energy	Lemoore	California	Solar Photovoltaic	20	48

Project (Name)	Counterparty	Location (City)	Location (State)	Technology	MW	GWh/Year
North Sky River	NextEra Energy Resources, LLC	Tehachapi	California	Wind	163	497
Total					713	1,798

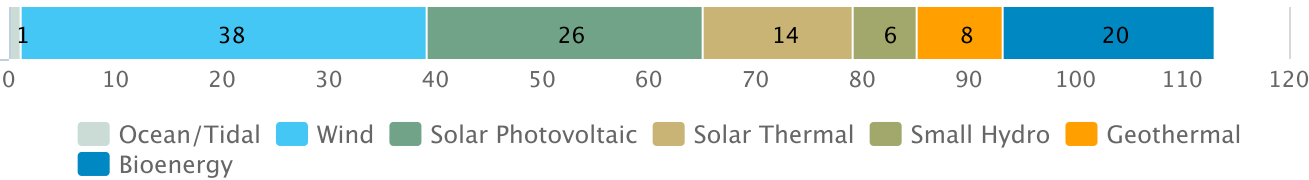
¹ This chart does not include small renewable generator contracts of up to 1.5 MW.

² Indicates contract is part of the 250 MW Solar Photovoltaic (PV) Independent Power Purchase (IPP) Program.

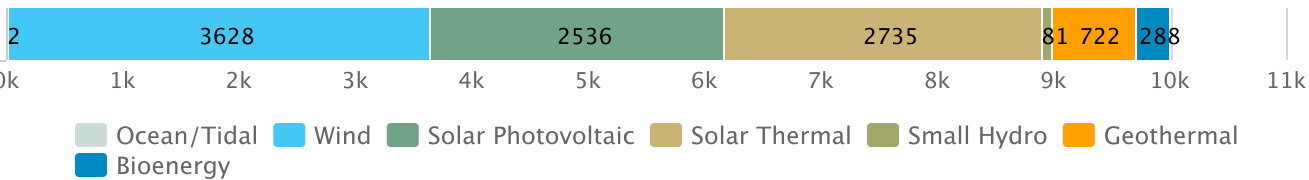
³ Replaces 2009 contract.

Renewable Portfolio Standard—Contracts Signed 2002-2011¹

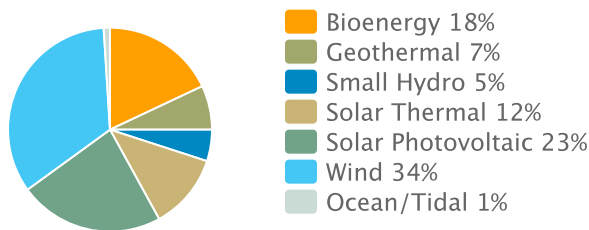
Number of Contracts Signed – Total 113



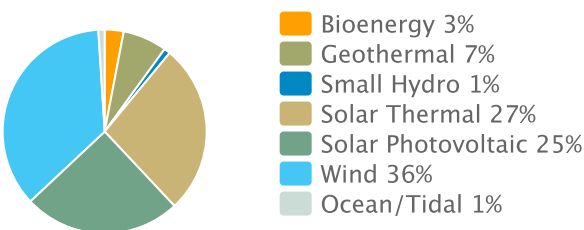
MW – Total 9,992



By Count



By Capacity



¹ Includes terminated, expired and CPUC-rejected contracts and does not include small renewable generator contracts of up to 1.5MW.

PG&E also saw a dramatic increase during 2011 in the rate of subscription for its Feed-In Tariff (FIT) program, which offers a standard contract and payment for renewable projects up to 1.5 MW. Last year, we executed 82 FIT contracts representing approximately 94 MW of RPS-eligible energy. In 2012, PG&E will expand its FIT program to accommodate renewable generation up to 3 MW.

Ownership of Renewables

PG&E is committed to bringing more renewables online for our customers as quickly and affordably as possible. As part of this commitment, we are working to develop and own new solar PV generation. The projects will range from 1 to 20 MW and be located near PG&E substations to reduce the costs of interconnection to the electric grid.



Photo of 20 MW Stroud Solar Station in Fresno County.

In 2011, we brought [three solar projects online in Fresno County](#)—the 15 MW Westside Solar Station, 20 MW Stroud Solar Station and 15 MW Five Points Solar Station—that collectively produce enough electricity to power about 15,000 homes. These projects add to PG&E's 2 MW Vaca-Dixon Solar Station, a pilot plant we brought online in 2010.

PG&E also constructed an [additional three solar projects](#) for the program's second phase. These projects, which came online in July 2012, are also located in Fresno County and are providing 50 MW of additional solar power. We have also begun site preparation for the third phase of the program, which will include two solar projects in Fresno County and one in Kings County.

As we work to develop new utility-owned solar power, we are leveraging the expertise of [diverse suppliers](#). We also work proactively with natural resource agencies to avoid impacts to sensitive species. This included siting the first three projects on previously disturbed land, conducting biological studies of the property and constructing fences around the perimeter that provide a small gap at the bottom for the endangered San Joaquin kit fox and other sensitive species to pass through.

Our development of these PV projects provides valuable lessons for PG&E. While we do not plan to explore additional renewable energy development and ownership opportunities at this time, we continue to work with other developers to meet California's renewable energy needs.

[Working Collaboratively to Address Challenges](#)

PG&E continues to participate in multiple forums to recommend sound policy solutions to the challenges California faces with respect to renewable resource development and interconnection.

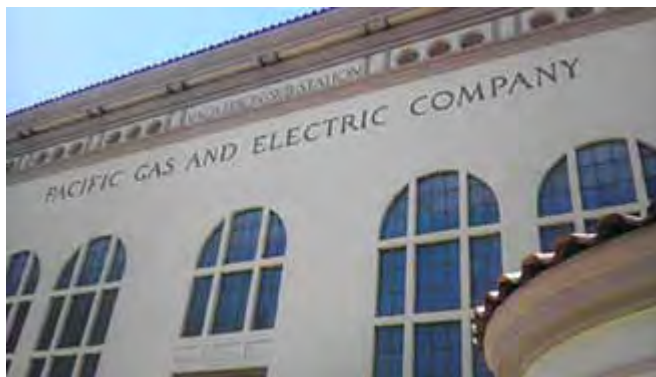
For example, we actively participate in the Stakeholder Committee of the [Desert Renewable Energy Conservation Plan \(DRECP\)](#). When complete, DCREP will provide a comprehensive approach to siting renewable projects away from sensitive desert habitats and in areas most suitable for development. We also continue to participate in the [California Transmission Planning Group](#), a group formed to create a state-wide electric transmission plan for the California Independent System Operator to address both renewable and conventional generation.

PG&E also continues to work constructively with the CPUC as the agency implements the expanded 33 percent RPS legislation. PG&E is challenged to ensure that the renewable energy it procures for customers is cost-effective and affordable. Therefore, a key priority for PG&E is to work with stakeholders and advocate compliance rules that help contain costs for our customers.

Piloting Energy Storage

As we move to a smarter grid that integrates more renewable energy sources, PG&E understands the importance of being able to store energy—whether in the form of batteries or other devices.

Among several energy storage technologies under study, PG&E is piloting a [high-efficiency 2 MW NaS battery](#) at the utility's Vaca-Dixon substation in Solano County. It is located about one-half mile from the utility's Vaca-Dixon Solar Station, which uses photovoltaic cells to generate about 2 MW of peak power.



PG&E is also demonstrating the viability of advanced, underground Compressed Air Energy Storage (CAES) technology. As envisioned, the project would store large amounts of intermittent renewable energy resources produced at night, especially wind, in the form of high-pressure air. By establishing the feasibility, costs and benefits of a CAES system, PG&E is helping to advance a project that has the potential to benefit California and beyond.

PG&E is in the first phase of the project, which involves exploring the technical and economic feasibility of a 300 MW facility with up to 10 hours of storage capability using a porous rock structure for energy storage at a location within PG&E's service area.

Wave Energy

Wave energy may be an important contributor to California's low-carbon economy in the future. Starting in 2007, PG&E began exploring the potential use of wave energy off of the California coast. Working with a wide range of community stakeholders such as fishermen, ocean protection advocates, wave energy companies, local government and port officials, surfers and bird watchers, we examined the feasibility and promise of wave energy.

After encountering significant challenges and concluding that it would be infeasible to pursue a FERC license for wave facilities, we suspended our wave energy efforts.

In December 2011, we filed our [final report](#) with the U.S. Department of Energy. The valuable lessons we learned through this project will help inform regulators, power providers and local communities seeking to understand and address the complex challenges facing this promising technology, including an evolving regulatory and permitting process and technological maturity issues. PG&E will continue to seek out cost-effective renewable resources for our customers across California, including wave energy development as the industry matures.

Hydro Operations

PG&E owns and operates the nation’s largest investor-owned hydroelectric system, providing a safe and reliable source of clean energy for millions of customers.

The system is built along 16 river basins stretching nearly 500 miles. PG&E’s 68 powerhouses, including a pumped storage facility, have a total generating capacity of 3,896 MW and rely on nearly 100 reservoirs located primarily in the higher elevations of California’s Sierra Nevada and Southern Cascade mountain ranges.



License Agreement Milestones

PG&E’s hydroelectric system consists of 26 federally licensed projects. As required by federal and state regulatory agencies, PG&E evaluates and mitigates the projects’ impacts on natural resources.

More than half of our operating licenses have been, or will be, up for renewal between 2000 and 2012. PG&E works with stakeholders during the renewal process to assess the impacts of these projects and try to find agreement on appropriate resource management measures—such as fish and wildlife habitat protection, riverbed conservation and recreational opportunities—to include as conditions of the new licenses. We have made it a priority to work collaboratively with our stakeholders, including federal and state agencies, local community members, environmental organizations, fishing interests and agricultural landholders, throughout the license renewal process.

We continue to make progress in enhancing our license compliance performance, which we measure by tracking our compliance with key environmental requirements. Using this approach, our compliance rate was 97.9 percent for the second year in a row.

PG&E’s management of our hydroelectric operations yielded important environmental benefits in 2011:

Environmental Stewardship in Our Hydroelectric Operations—2011	
Miles of stream monitored for environmental condition ¹	438
Acres of bird nesting territories monitored ²	5,875
Acres monitored and/or treated for noxious weed control	1,960
Cubic yards of gravel added to streams to enhance fish spawning habitat	203
Acres monitored for use by special-status species ³	2,433

¹ This measure refers to miles of stream monitored for its environmental condition, 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 are those that are listed under the federal or state Endangered Species Acts or as a sensitive species by the U.S. Fish and Wildlife Service. Monitoring studies are required under various hydroelectric licenses.

We achieved many important milestones in our license agreements in 2011:

- As part of implementing the 36-year operating license for the Pit 3, 4 and 5 hydroelectric project, PG&E completed upgrades to new instream release facilities at the project's dams in 2011. These facilities allow PG&E to release higher minimum in-stream flows, enhancing habitat for fish, frogs and other species. Moving forward, PG&E will evaluate these enhancements with regulatory agencies and other stakeholders, while also continuing to monitor species such as bald eagles and Northern spotted owls to ensure local populations remain healthy. Additionally, our work toward improving recreational facilities in the region will continue in 2012.
- We filed a license application for the existing Drum-Spaulding hydroelectric project on the Yuba and Bear rivers, PG&E's most complex conventional hydroelectric project. We proposed to continue operating the project's 12 powerhouses, 10 of which total about 86 MW of capacity and qualify as [renewable resources](#). Our application reflected collaborative discussions with multiple stakeholders and addressed environmental, cultural resource and recreation issues. It proposed measures to protect, mitigate and enhance natural resources and recreation opportunities associated with the project area while providing significant public water supply benefits.



PG&E is making major recreation improvements to Pinecrest Lake, a popular destination for fishing, swimming and boating.

- We continued to implement a new 38-year license for the 87.9 MW Spring Gap-Stanislaus hydroelectric project, located on the Stanislaus River in Tuolumne and Calaveras counties. In 2011, we began a multi-year effort to make major recreation improvements to Pinecrest Lake, a key reservoir for the system and a popular destination for fishing, swimming and boating. Working with the Stanislaus National Forest, we are upgrading the lake's facilities to reduce water consumption and energy use, enhance recreation, meet accessibility needs and improve traffic and parking conditions. [View our plans and progress to date.](#)

Restoring Salmon and Steelhead Habitat

PG&E's environmental commitment includes working to manage our hydro facilities in a manner that restores and enhances habitat for fish and other wildlife. This includes several projects where we are actively working to restore vital streambed habitat for steelhead and salmon, which live their adult lives in the sea and migrate—sometimes hundreds of miles—upstream to spawn.

Battle Creek Salmon and Steelhead Restoration Project

In Tehama County near Mount Lassen, we continue to work with government agencies and other groups to [restore historic salmon runs](#) along Battle Creek in one of the country's largest cold water fish restoration efforts. We have removed or will remove five of our eight diversion dams in the area, and we are retrofitting the remaining three with fish screens and ladders to allow spawning fish to travel upstream. Doing so will allow winter- and spring-run salmon to pass through 48 miles of streams and habitat.

At the end of 2011, wildlife officials reported seeing [more than four times](#) the number of Chinook salmon nests normally seen upstream in North Fork Battle Creek. Partners in the restoration project note that the growing number of fish signifies that the project goal of increasing populations of anadromous fish—which begin life in freshwater creeks and live part of their lives in the ocean—is already under way, even while project construction continues.

Butte Creek

In Butte County, PG&E's DeSabra-Centerville hydroelectric project provides a unique benefit to endangered Chinook salmon and steelhead. A key feature of this ongoing project is an 8-mile diversion canal that brings colder water from the nearby West Branch of the Feather River to Butte Creek, encouraging fish to migrate to Butte Creek. Together with efforts to improve water quality, install fish screens and remove barriers to fish migration, this project has successfully restored a significant population of salmon and steelhead to the area.

Investing in Our Infrastructure

We continue to invest in our hydroelectric infrastructure to ensure the safety and reliability of the system, as well as the safety of our employees and the public. In 2011, we made major investments in several projects.

Helms Pumped Storage Facility

Our [Helms pumped storage facility](#), high in the Sierra Nevada Mountains east of Fresno, is our largest and most unique hydroelectric project, able to power 900,000 California homes. The facility is located deep underground between two reservoirs. It uses three turbine generators to pump water uphill when demand for

electricity is low; then, when demand is high, the water is released downhill to regenerate electricity.



When a similar facility in Austria experienced a major mechanical failure, PG&E proactively inspected the Helms facility to prevent such a breakdown. This included using a high-tech, 3-D technology scanner to accurately assess the system's rotors. The [quick response by PG&E and Helms workers](#) identified problems early and enabled repairs to be made that avoided damage to the plant. The early detection and repair also created a safe working environment for our employees and prevented serious operational breakdowns that would have resulted in extended outages and costly repairs. Repairs were completed in 2012.

Bear River Canal

Last year, a landslide in a remote canyon in Placer County [significantly damaged](#) PG&E's Bear River Canal, halting water flow to the Placer County Water Agency and the Nevada Irrigation District, which serve local homes, businesses, farms and ranches.

PG&E crews worked around the clock with the local water agencies to restore the canal as safely and quickly as possible. We began with a temporary solution to deliver water to the tens of thousands of local residents whose water supply had been disrupted. Within weeks, the company had bypassed the canal to reestablish water flow. PG&E then completed permanent repairs to the canal, as well as environmental restoration of the area affected by the landslide. This included replanting vegetation that was washed away during the break or removed during the construction process.



PG&E crews work to repair damage to the canal.

Crane Valley Dam

In Madera County, the Crane Valley Dam at Bass Lake [continues to undergo](#) major upgrades to meet tightened seismic requirements and increase public safety. The dam, which was built between 1902 and 1911, will be 50 feet wider at its base by the time the upgrades are completed in 2013. In the meantime, PG&E is working closely with the local community to ensure that the many recreational opportunities on Bass Lake are maintained during the retrofitting process. PG&E is also taking measures to ensure public safety during the process and is elevating community outreach through community meetings and a comprehensive [website](#).



Conventional Power Sources

PG&E's efforts to build a clean energy portfolio also include making long-term investments in conventional generation that, under specific state requirements, must meet a greenhouse gas emissions performance standard equivalent to an efficient, combined-cycle natural gas plant. These efforts include new, highly efficient and flexible natural gas-fueled plants owned and operated by PG&E, as well as long-term contracts with third-parties.



PG&E's 163 MW Humboldt Bay Generating Station employs technology that produces significantly fewer emissions than the older plant it replaced.

Past Ownership of Conventional Generation

Prior to 1999, PG&E owned more than 7,000 MW of oil- and gas-fired conventional boilers and combustion turbine generating facilities. In the late 1980s and into the 1990s, PG&E began to modify its fossil fleet in a programmatic fashion to substantially reduce NO_x air emissions.

In the late 1990s, in response to California's electric energy deregulation law, PG&E sold all but two of its fossil-fueled power plants, Hunters Point Power Plant and Humboldt Bay Power Plant. PG&E also sold its renewable geothermal facilities at The Geysers. As part of an agreement with the City of San Francisco, PG&E retained its Hunters Point Power Plant and committed to retire it when the plant was no longer needed to ensure electric reliability for customers. PG&E retired this plant in 2006.

Separately and voluntarily, PG&E targeted the second remaining PG&E-owned conventional generating facility, the Humboldt Bay Power Plant, for replacement with a new cleaner, high-performance plant at the same site. PG&E did not sell the Humboldt plant because of its obligation to decommission a retired nuclear generating unit at the site.

New Plants Owned and Operated by PG&E

More recently, PG&E has received permission from the CPUC to own and operate new, state-of-the-art natural gas-fired plants with emissions levels that are best in class.

PG&E has safely commissioned three substantial, new generating facilities since early 2009:

- **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 produces significantly less SO₂, NO_x and CO₂ emissions 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 electrical capacity to the area. The plant's design—selected for the region because of its low emissions and flexibility—uses reciprocating engines that are air-cooled, reducing water use by eliminating the need for once-through cooling from Humboldt Bay.



Photo of the Humboldt Bay Generating Station.

■ **Colusa Generating Station:**

This 657 MW combined cycle natural gas plant features cleaner burning turbines that allow the plant to use less fuel and emit significantly less 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 during peak energy demands or in emergency situations. In addition, the plant is designed to lower its power output when renewable resources like wind and solar become available. The plant uses a zero liquid discharge system that recycles waste water and further reduces the amount of water needed by the facility.



Photo of the Colusa Generating Station.

Proactively Managing Our Emissions

At the Colusa Generating Station, a team of employees created a first-of-its-kind air [emissions calculator](#) that helps to protect local air quality and ensures that PG&E maintains full compliance with regulatory requirements. The calculator helps operators at the plant to proactively manage air emissions from the high-efficiency facility. The team has made the calculator available for use at other PG&E facilities that have similar complex air-quality permits. The team earned PG&E's 2011 Richard A. Clarke Environmental Leadership Award.

■ **Gateway Generating Station:**

This 580 MW combined cycle natural gas plant has 530 MW of base capacity and 50 MW of low-cost peaking capability. On average, the plant yields dramatically less NO_x, SO₂ and CO₂ for every megawatt-hour of power produced compared to older fossil-fueled plants. Gateway also uses dry cooling technology, which allows the plant to use 97 percent less water than older plants with once-through cooling water systems.



Photo of the Gateway Generating Station.

PG&E's Air Emissions

To comply with stringent local air quality regulations, PG&E is focused on minimizing air emissions from its conventional sources of power generation. The following figures reflect emissions from PG&E-owned generation sources.

Air Emissions¹

	2009	2010	2011
Total NO_x Emissions (tons)	1,258	904	144
Humboldt Bay Power Plant ²	1,167	819	N/A
Humboldt Bay Generating Station ³	N/A	5	23
Gateway Generating Station ⁴	92	78	73
Colusa Generating Station ⁵	N/A	1.5	48
NO_x Emissions Rates (lbs/MWh)			
Humboldt Bay Power Plant	4.05	4.27	N/A
Humboldt Bay Generating Station	N/A	0.08	0.10

	2009	2010	2011
Gateway Generating Station	0.07	0.05	0.06
Colusa Generating Station	N/A	0.04	0.05
Fossil Plants	0.82	0.49	0.06
All Plants	0.09	0.06	0.008
Total SO₂ Emissions (tons)	37	42	12
Humboldt Bay Power Plant	31	34	N/A
Humboldt Bay Generating Station	N/A	1	2
Gateway Generating Station	6	7	6
Colusa Generating Station	N/A	0.14	4
SO₂ Emissions Rates (lbs/MWh)			
Humboldt Bay Power Plant	0.11	0.179	N/A
Humboldt Bay Generating Station	N/A	0.015	0.009
Gateway Generating Station	0.01	0.004	0.005
Colusa Generating Station	N/A	0.004	0.004
Fossil Plants	0.02	0.023	0.005
All Plants	0.003	0.003	0.0007
Total Particulate Matter Emissions (tons)	53	62	96
Humboldt Bay Power Plant	35	23	N/A
Humboldt Bay Generating Station	N/A	16	51
Gateway Generating Station	18	22	19
Colusa Generating Station	N/A	0.9	27
Total CO Emissions (tons)	156	123	43
Humboldt Bay Power Plant	142	100	N/A
Humboldt Bay Generating Station	N/A	9	15
Gateway Generating Station	14	9	10
Colusa Generating Station	N/A	6	18
Total VOC Emissions (tons)	38	54	74
Humboldt Bay Power Plant	31	28	N/A
Humboldt Bay Generating Station	N/A	19	66
Gateway Generating Station	7	8	7
Colusa Generating Station	N/A	0.02	1

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 emissions from PG&E's facilities during 2009 to 2011.

² The Humboldt Bay Power Plant (Humboldt Bay) facilities, two operating fossil fuel-fired plants and two mobile turbines, were retired at the end of September 2010.

³ The new high-performance Humboldt Bay Generating Station became operational in September 2010.

⁴ Gateway Generating Station became operational in January 2009.

⁵ Colusa Generating Station became operational in December 2010.

Benchmarking NO_x and SO₂ Emissions¹

	2008	2009	2010
National average, NO _x	1.78 lbs/MWh	1.34 lbs/MWh	1.33 lbs/MWh
PG&E's emissions rate, NO _x	0.09 lbs/MWh	0.09 lbs/MWh	0.06 lbs/MWh
National average, SO ₂	4.19 lbs/MWh	3.33 lbs/MWh	2.88 lbs/MWh
PG&E's emissions rate, SO ₂	0.002 lbs/MWh	0.003 lbs/MWh	0.003 lbs/MWh

¹ Source of national average data is the U.S. Energy Information Administration's Electric Power Annual report.

New Plants Under Contract

In 2010, PG&E received CPUC approval of several long-term power purchase contracts with new natural gas-fueled plants to be owned and operated by third-parties. Consistent with our corporate environmental and environmental justice policies, PG&E strives to minimize impacts from these facilities by considering and working to address their potential environmental and community impacts as part of our comprehensive due diligence process.

PG&E received CPUC approval to purchase power from a new third-party owned 719 MW peaker plant near Antioch. As part of the power purchase agreement for the new facility, the project developer agreed to retire two older existing boiler units that use once-through cooling before bringing the new plant online in 2013. Doing so will reduce local air and water impacts and demonstrates our commitment to environmental justice.

PG&E also received regulatory approval to purchase power from a new third-party-owned 184 MW natural gas plant to be built in Alameda County. Planned for 2012, the plant will be capable of starting rapidly when needed, which is especially important for integrating intermittent renewables into the grid. Two other third-party contracts receiving CPUC approval involved converting existing combustion turbine facilities into high-efficiency, higher-capacity combined cycle units—a 299 MW plant in Tracy expected to begin operations in 2012 and a 289 MW plant near San Jose expected to begin operations in 2013.

Nuclear Operations

For more than 25 years, [Diablo Canyon Power Plant \(Diablo Canyon\)](#) and the employees who work there have been an integral part of the San Luis Obispo community and have helped meet California's energy needs. The plant safely provides reliable and virtually carbon-free energy for about 20 percent of PG&E's customers each year. That's enough energy to meet the needs of nearly 3 million households, with almost zero greenhouse gas emissions.



Learning from the Fukushima Daiichi Accident

Like other members of the nuclear industry, [PG&E continues to analyze the serious accident at the Fukushima Daiichi nuclear power plant](#). In fact, we have established teams at Diablo Canyon whose focus is the ongoing analysis of the event and applying lessons learned to effectively manage and swiftly respond to an emergency.

Beginning on the day of the Fukushima tragedy, PG&E quickly launched a detailed and thorough review of our operations, specifically analyzing Diablo Canyon's ability to respond to beyond-design-basis events (events beyond what the facility was designed to withstand). As a result, we took the following steps:

- Confirmed that Diablo Canyon's design is appropriate and able to withstand regional environmental hazards, including beyond-design-basis tsunamis and earthquakes;
- Verified the safety of the plant's systems and emergency response procedures;
- Created a team specifically to examine opportunities to improve the facility's ability to withstand beyond-design-basis events;
- Began making modifications to strengthen the ability of the plant to withstand beyond-design-basis events, including extended blackouts;
- Conducted rigorous emergency preparedness training, specifically for beyond-design-basis events. This includes the ability to initiate emergency procedures for events affecting more than one nuclear unit at the site, as well as training and qualifications for beyond-design-basis events procedures;
- Secured plans to acquire off-site supplies and equipment that the plant may need during a beyond-design-basis event.

Moving forward, PG&E will continue to work thoughtfully to address and implement new industry orders and recommendations from the Nuclear Regulatory Commission (NRC) to ensure the continued safety of the plant.

Commitment to Long Term Seismic Studies

PG&E remains focused on ensuring that Diablo Canyon continues, and improves upon, its strong record of safe operations. This includes making the facility resilient to natural hazards, including earthquakes and tsunamis.

Shortly after commercial operations began and as part of our licenses to operate Diablo Canyon, PG&E implemented a Long Term Seismic Program. Under this program, a team of geoscientists study local geographic features and regional and global seismic events on an ongoing basis and apply new information to [ensure that Diablo Canyon is seismically safe](#).

An important component of the program is PG&E's work with the U.S. Geological Survey (USGS) to update the understanding of earthquake hazards along the Central Coast and throughout PG&E's service area. As a result of this program, a shoreline fault zone was discovered in 2008. PG&E evaluated whether that fault line presented a safety risk to the plant and submitted its evaluation to the NRC under the commitment of its current operating licenses. PG&E's evaluation confirmed the plant has an adequate safety margin to withstand ground motions associated with the shoreline fault zone.

PG&E takes seriously the concerns expressed by customers and neighbors in the community about the seismic safety characteristics of Diablo Canyon. In response to those concerns, PG&E made a formal request to the NRC in April 2011 to delay the final issuance of the plant's license renewal, a process that began in late 2009, until PG&E completes appropriate seismic studies.

Once available, data from the studies will be incorporated into the facility's safety plans under the Long Term Seismic Program. PG&E will also share the information collected with local, state and federal government agencies, so they can incorporate it into emergency preparedness plans and enhance public safety for the entire Central Coast of California.

Continued Investment and Used Fuel Storage

Since operation began in 1985, PG&E has invested more than \$1 billion on significant upgrades to Diablo Canyon. In 2011, this included a planned outage to refuel Unit 2 and perform scheduled testing and maintenance to maintain performance and reliability.

At the former nuclear unit at Humboldt Bay Power Plant, PG&E has completed large component removal as part of the first phase to remove radioactive components, piping and some structures. Subsequently, PG&E will remove all other equipment and decontaminate structures to permit building demolition and site restoration. A review from the NRC will follow site restoration.

At both Diablo Canyon and Humboldt Bay, PG&E uses on-site dry cask storage systems, approved and licensed by the NRC, to safely store used fuel until the federal government fulfills its commitment to take

ownership of the fuel by building a permanent storage facility. These on-site storage systems are used at nuclear power plants across the country, and protect the used fuel against a range of threats, including severe weather, earthquakes and terrorism.

(For additional information on waste storage and other issues associated with Diablo Canyon and Humboldt Bay, please see page 45 of the PG&E Corporation and Pacific Gas and Electric Company [2011 Annual Report to Shareholders](#).)

Supporting the Local Community

Diablo Canyon is an [integral member of San Luis Obispo County and contributes greatly to the local community](#). As a major employer and purchaser of goods and services, Diablo Canyon contributed nearly \$28 million in property taxes to San Luis Obispo and Santa Barbara counties in 2011.

Additionally, our employees volunteer thousands of hours through educational, environmental and other community projects that benefit the region. They also contribute financially to nonprofit organizations through PG&E's annual [Employee Giving Campaign](#).

PG&E also has made local charitable contributions of nearly \$1.1 million to more than 90 local nonprofits including school programs, senior centers and other vital community projects.

Visitors can learn about the plant and a range of energy-related topics at our Energy Education Center, which is also available for use as an evacuation center in the case of an emergency. Also, guided tours of Diablo Canyon provide an opportunity to speak directly with employees and learn how Diablo Canyon provides safe, clean, affordable and reliable electric service.

Land Stewardship at Diablo Canyon

Located on one of the most scenic coastlines in the country, Diablo Canyon is surrounded by more than 12,000 acres of land that stretches across 14 miles of pristine coastline—extending from Port San Luis to Montana de Oro State Park and inland about a mile and a half to the peaks of the Irish Hills.

The site is home to many species of plant and animal wildlife, including the American peregrine falcon, and nearshore marine habitats that support marine wildlife species, including the brown pelican, southern sea otter and northern elephant seal.

A cross-functional team manages PG&E's stewardship of the property, continuing a program that was created in 1990 to protect the site's natural and cultural resources and conserve its biological diversity.

Today, PG&E's active stewardship includes livestock grazing, which has resulted in a healthier rangeland habitat that sustains native plant species while reducing invasive plant species. PG&E also allows scientists and others to explore the area's habitat and ecology. This includes archaeology students from nearby California Polytechnic State University, who, in partnership with PG&E, are engaged in a multi-year research project focused on the prehistory of the Pecho Coast. A field class in 2011 provided a unique learning experience for the students and is assisting PG&E with managing and interpreting the rich archaeological

resources located on the property.

The property also includes two scenic trails that are open to the public—the 3.3-mile Point Buchon Trail and 3.75-mile Pecho Coast Trail. As part of our broader effort to promote environmental education, docent naturalists, which include plant employees, lead groups along Pecho Coast Trail and provide information about the location's history, cultural resources and biological diversity.



Cal Poly students and instructors worked with PG&E and Native American tribal representatives to investigate cultural resources near Diablo Canyon.

Addressing Climate Change

As a provider of gas and electricity to millions of Californians and an emitter of greenhouse gases, PG&E is keenly aware of its responsibility to both manage its emissions and work constructively to advance policies that put our state and the country on a cost-effective path toward a low-carbon economy, including our early and active support for California’s landmark [Global Warming Solutions Act \(AB 32\)](#).

PG&E’s commitment to addressing climate change is an integral part of our business. This ranges from our role as a national advocate for aggressive energy efficiency programs to our efforts to expand renewable energy supplies and provide new tools and incentives to help our customers understand, manage and reduce their energy use.



Reporting Our Impacts

We believe it is critical 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 and to The Climate Registry on a voluntary basis as described below.

Mandatory Emissions Reporting

Since 2009, PG&E has complied with AB 32’s annual [greenhouse gas emissions reporting requirements](#), reporting combustion emissions from our electric generation facilities and natural gas compressor stations to the ARB.

For our 2011 emissions, PG&E began reporting the greenhouse gas emissions from 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 anticipates a compliance obligation associated with the natural gas supplied to customers, less the fuel that is delivered to covered entities. The following table shows the greenhouse gas emissions data PG&E reported to the ARB under AB 32.

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

	2009	2010	2011
Total CO ₂ Emissions (metric tonnes)	1,401,487	1,545,892	2,024,206

	2009	2010	2011
Humboldt Bay Power Plant ²	390,339	276,811	N/A
Humboldt Bay Generating Station ³	N/A	59,111	216,417
Gateway Generating Station ⁴	1,011,147	1,209,970	1,042,896
Colusa Generating Station ⁵	N/A	N/A	764,894
CO₂ Emissions Rates (lbs/MWh)			
Humboldt Bay Power Plant	1,558	1,591	N/A
Humboldt Bay Generating Station	N/A	1,004	1,022
Gateway Generating Station	895	861	868
Colusa Generating Station	N/A	N/A	851
Fossil Plants	1,016	943	875
All Plants	110	106	126
Other CO₂-equivalent Emissions (metric tonnes)			
Natural Gas Compressor Stations ⁶	255,277	235,789	237,985
Fugitive Natural Gas Emissions ⁷	N/A	N/A	244,951
Customer Natural Gas Use ⁸	N/A	N/A	39,049,732

¹ PG&E's utility-owned generation comprised more than 40 percent of our delivered electricity in 2011. PG&E also reported N₂O and CH₄ emissions from each of our generating stations.

² The Humboldt Bay Power Plant facilities, two operating fossil fuel-fired plants and two mobile turbines, were retired at the end of September 2010.

³ Humboldt Bay Generating Station became operational in September 2010.

⁴ Gateway Generating Station became operational in January 2009.

⁵ Colusa Generating Station became operational in December 2010 and was exempt from CO₂ reporting for 2010.

⁶ Includes compressor stations emitting more than 25,000 metric tonnes of CO₂-e annually.

⁷ Includes fugitive emissions from PG&E's compressor stations and gas distribution and transmission system.

⁸ Includes 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 will be equivalent to the above reported value less the fuel that is delivered to covered entities as calculated by ARB.

Beginning with our 2010 emissions, PG&E also reported the greenhouse gas emissions from our facilities and operations to the U.S. EPA under its [mandatory reporting requirements](#). Our 2011 emissions report will also include emissions from natural gas delivered to customers and fugitive emissions from our natural gas distribution system, including compressor stations. However, differing from ARB's reporting requirements, the U.S. EPA regulations exclude PG&E accounting for natural gas delivered to "large" end users (those that consume more than 460 million cubic feet of natural gas annually).

Voluntary Emissions Reporting

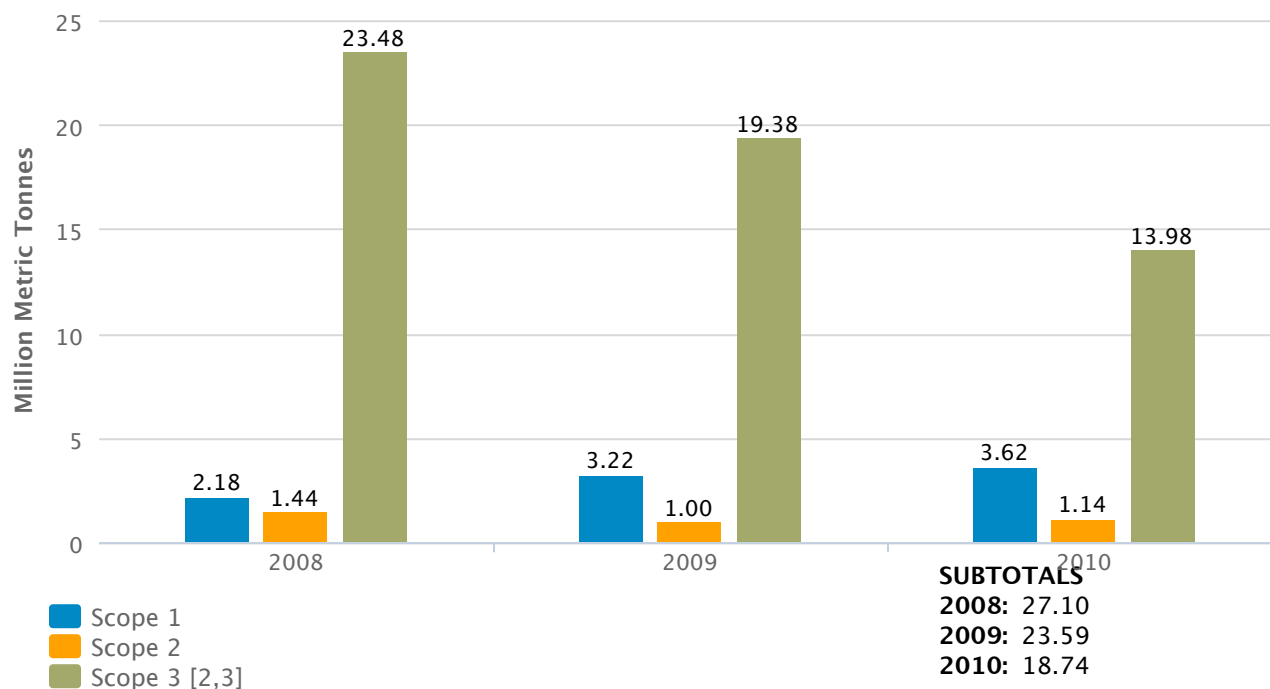
PG&E was a charter member of the [California Climate Action Registry](#) and voluntarily reported its greenhouse gas emissions to the organization annually from 2002 through 2008. PG&E has since voluntarily reported its greenhouse gas emissions to [The Climate Registry](#), a successor non-profit entity that has reporting and measurement standards applicable to most industry sectors across North America.

In 2010, the total CO₂ emissions from PG&E's delivered electricity declined by about 25 percent from the prior year to 15.6 million metric tonnes, as reported to The Climate Registry. This decline owed, in large part, to an increase in the amount of zero- and low-emitting electricity in our power portfolio (including hydro) and the expanded use of cleaner fossil-fueled electricity, including two new, state-of-the-art natural gas-fired plants that PG&E brought into service in 2010. Several factors affect PG&E's power mix and emissions from year to year, including demand growth, the weather and the availability of hydro power.

In 2010, PG&E's independently verified CO₂ emissions rate associated with the electricity delivered to customers was 445 pounds of CO₂ per MWh, about 23 percent lower than the prior year. PG&E's emissions rate was about 30 percent cleaner than the California average and more than 60 percent cleaner than the national utility average. Our emissions rate takes into account emissions from both PG&E-owned power generation and power purchased from third parties.

Beginning in 2010, PG&E expanded its voluntary greenhouse gas emissions inventory to include the emissions associated with the natural gas that we delivered to customers. This is an emerging area that PG&E will continue to explore in light of evolving reporting requirements and best practices for this aspect of our business.

PG&E's Scope 1, 2 and 3 Greenhouse Gas Emissions (Metric Tonnes CO₂-e) [1]

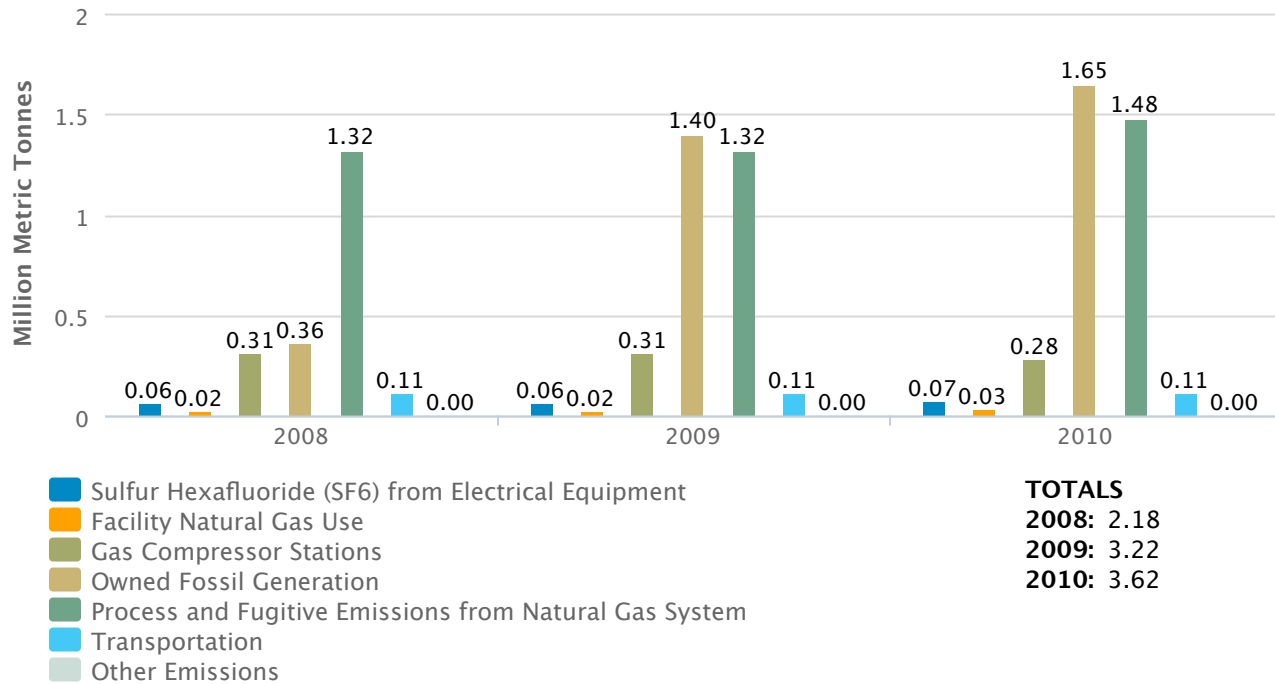


¹ Because PG&E purchases a portion of its electricity from the wholesale market, we are not able to track some of our delivered electricity back to a specific generator. Therefore, there is some unavoidable uncertainty in PG&E's total emissions and emissions rate for delivered electricity.

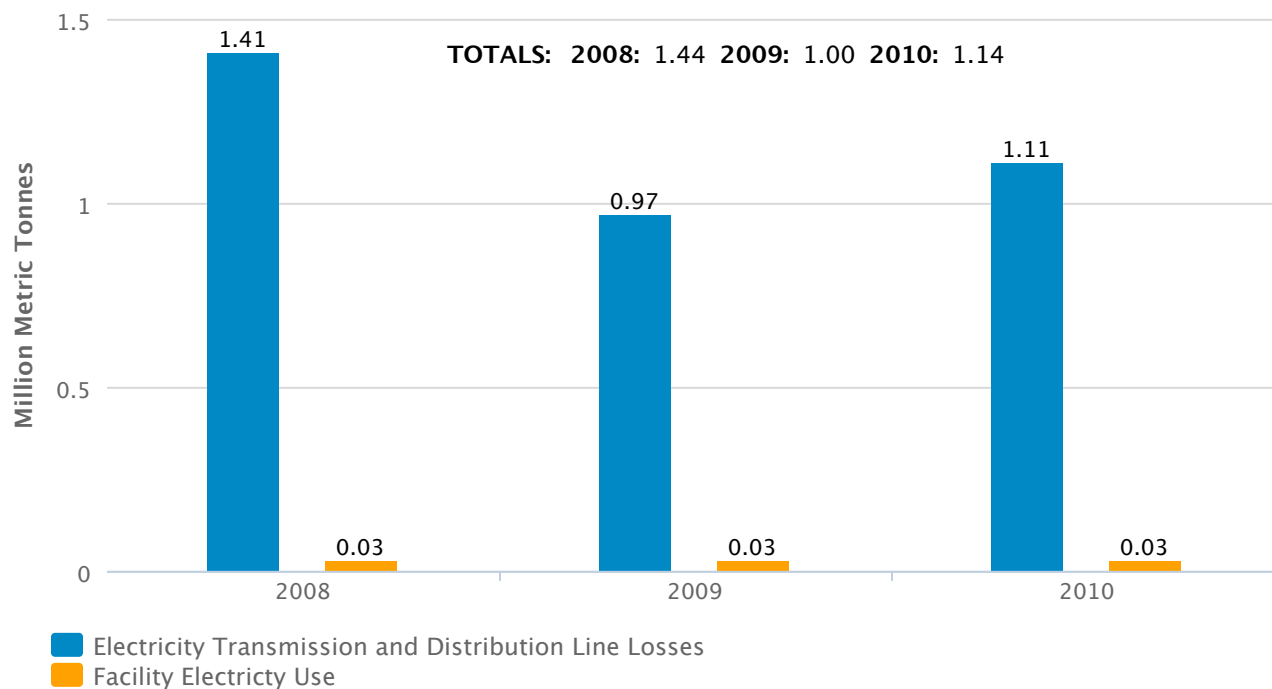
² The emissions associated with this electricity are considered Scope 3 per The Climate Registry's Electric Power Sector Protocol for the Voluntary Reporting Program, Annex I to the General Reporting Protocol, June 2009, Version 1.0.

³ PG&E voluntarily reported an additional 35.85 million metric tonnes of Scope 3 CO₂-e emissions from the natural gas that it delivered to customers in 2010. This figure represents the emissions from the combustion of natural gas delivered to all entities on PG&E's distribution system, with the exception of gas delivered to other natural gas local distribution companies, as well as gas delivered to PG&E facilities such as power plants, compressor stations, and offices, the emissions of which are reported separately. Because this figure is not third-party verified, it is not included in the table above.

PG&E's Scope 1 Greenhouse Gas Emissions (Metric Tonnes CO₂-e)

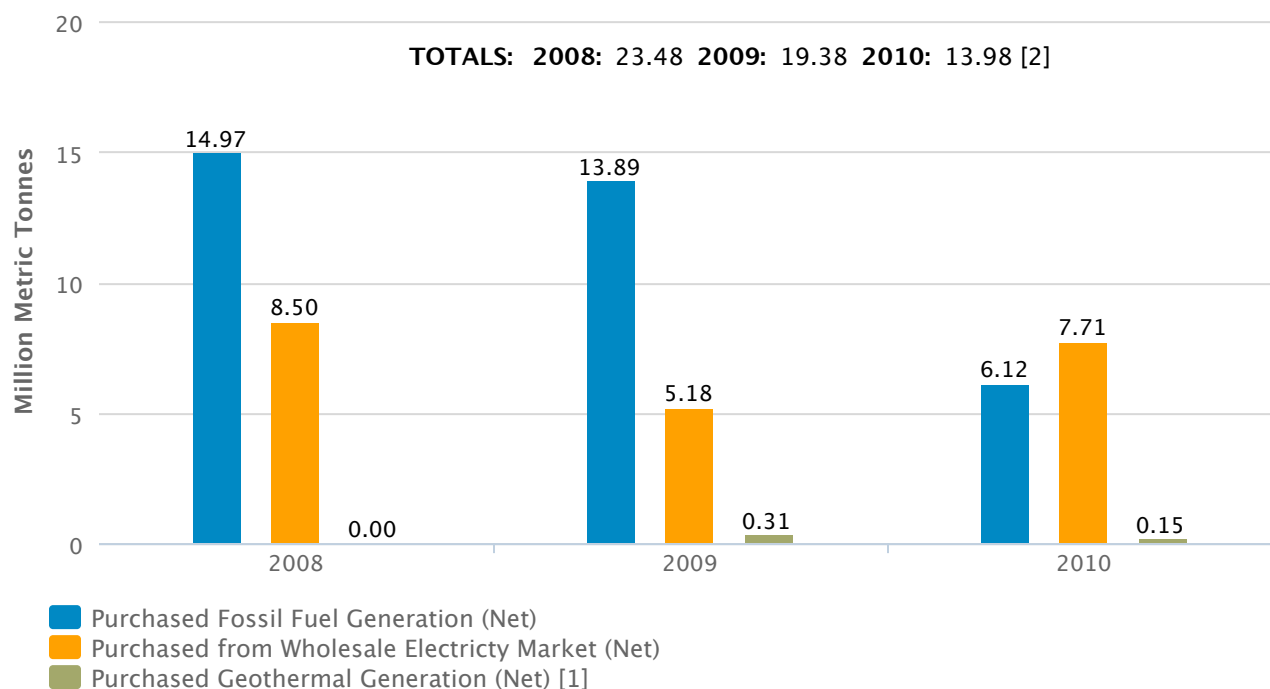


PG&E's Scope 2 Greenhouse Gas Emissions (Metric Tonnes CO₂-e)



PG&E's Scope 3 Greenhouse Gas Emissions

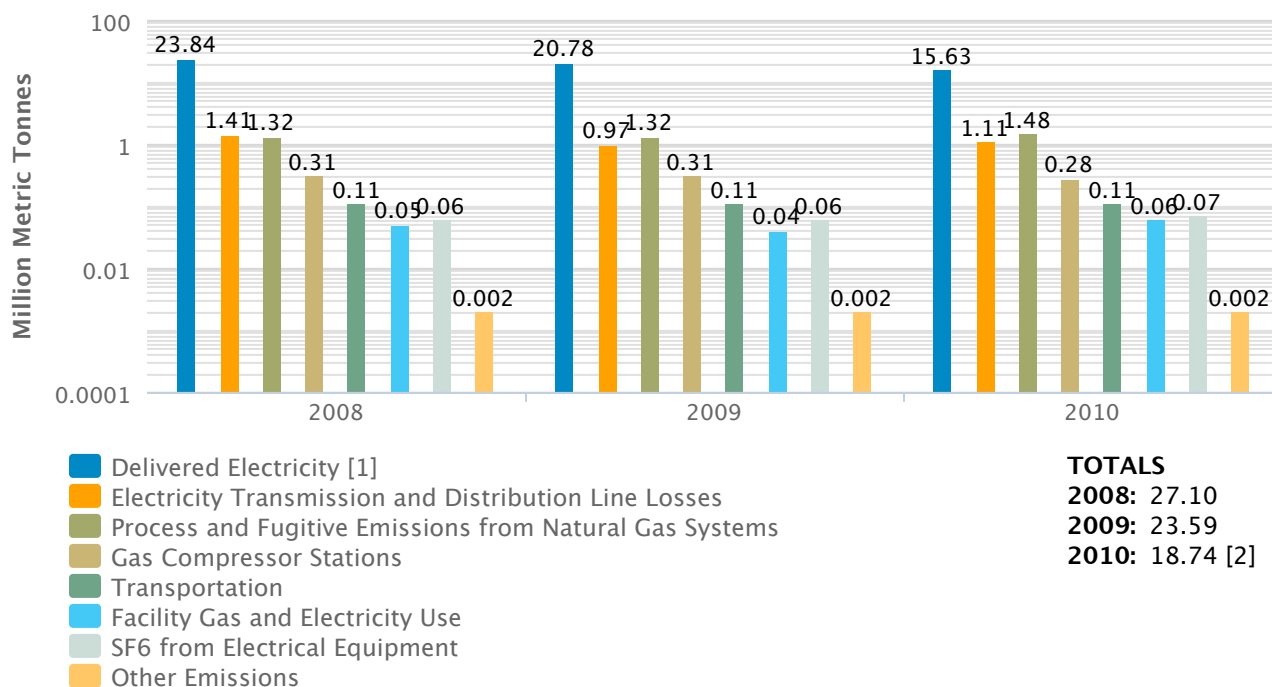
(Metric Tonnes CO₂ for Purchased Electricity)



¹ Prior to 2009, PG&E did not account for the process greenhouse gas emissions from geothermal generation.

² PG&E voluntarily reported an additional 35.85 million metric tonnes of Scope 3 CO₂-e emissions from the natural gas that it delivered to customers in 2010. This figure represents the emissions from the combustion of natural gas delivered to all entities on PG&E's distribution system, with the exception of gas delivered to other natural gas local distribution companies, as well as gas delivered to PG&E facilities such as power plants, compressor stations and offices, the emissions of which are reported separately. Because this figure is not third-party verified, it is not included in the table above.

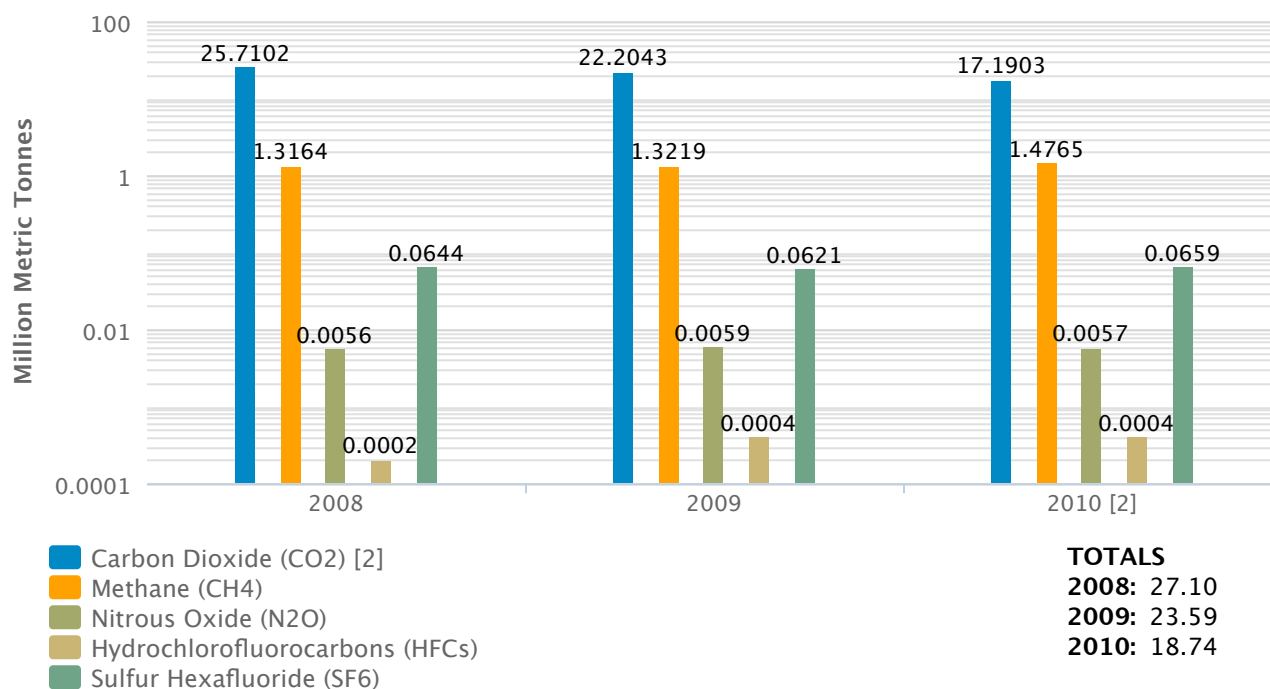
Total Greenhouse Gas Emissions by Source Category (Metric Tonnes CO₂-e)



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 PG&E voluntarily reported an additional 35.85 million metric tonnes of Scope 3 CO₂-e emissions from the natural gas that it delivered to customers in 2010. This figure represents the emissions from the combustion of natural gas delivered to all entities on PG&E's distribution system, with the exception of gas delivered to other natural gas local distribution companies, as well as gas delivered to PG&E facilities such as power plants, compressor stations, and offices, the emissions of which are reported separately. Because this figure is not third-party verified, it is not included in the table above.

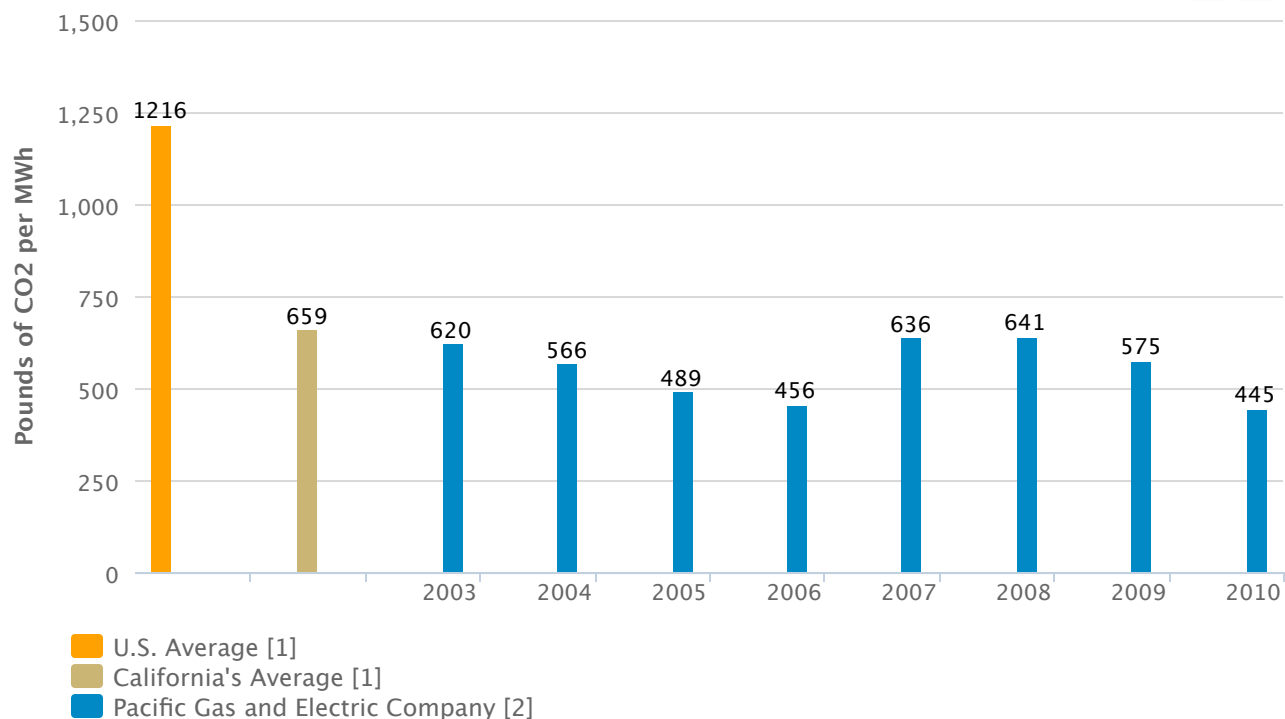
Breakdown of Emissions by Greenhouse Gas (Million Metric Tonnes CO₂-e) [1]



¹ PG&E emits no perfluorocarbons (PFCs).

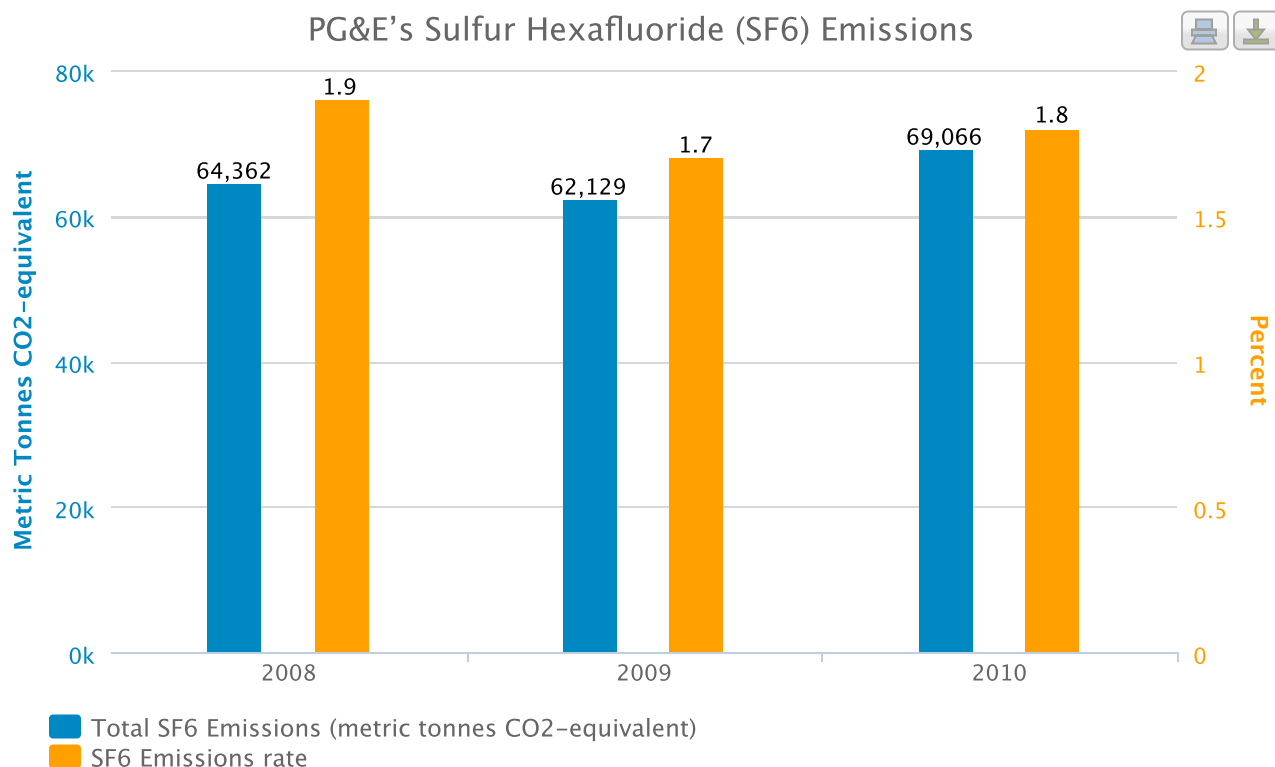
² PG&E voluntarily reported an additional 35.85 million metric tonnes of Scope 3 CO₂-e emissions from the natural gas that it delivered to customers in 2010. This figure represents the emissions from the combustion of natural gas delivered to all entities on PG&E's distribution system, with the exception of gas delivered to other natural gas local distribution companies, as well as gas delivered to PG&E facilities such as power plants, compressor stations, and offices, the emissions of which are reported separately. Because this figure is not third-party verified, it is not included in the table above.

Benchmarking Greenhouse Gas Emissions for Delivered Electricity



¹ Source: U.S. Environmental Protection Agency eGRID2012 Version 1.0, which contains year 2009 information configured to reflect the electric power industry's current structure as of May 10, 2012.

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.



Since 2005, PG&E has also voluntarily reported greenhouse gas emissions to the [Carbon Disclosure Project \(CDP\)](#), an independent not-for-profit organization holding the largest database of primary corporate climate change information in the world. Thousands of companies from across the world measure and disclose their greenhouse gas emissions and climate change strategies through the CDP. In 2011, PG&E was once again named to the [CDP's Carbon Disclosure Leadership Index](#) for companies in the S&P 500.

Addressing Our Own Carbon Footprint

PG&E understands the imperative of reducing emissions from our sector. While some companies have set voluntary greenhouse gas reduction goals, PG&E has refrained from doing so due to impending state mandates. [AB 32](#) requires the gradual reduction of greenhouse gas emissions in California to the 1990 level of 427 million metric tons of CO₂-equivalent by 2020. In addition, separate from AB 32, PG&E's facilities in the nine-county San Francisco Bay Area now pay a greenhouse gas emissions fee of 4.8 cents per metric tonne CO₂-equivalent on emissions from facilities such as fossil-fueled power plants, natural gas compressor stations and emergency generators.

We continue to work to minimize our carbon footprint. Ongoing efforts include the following:

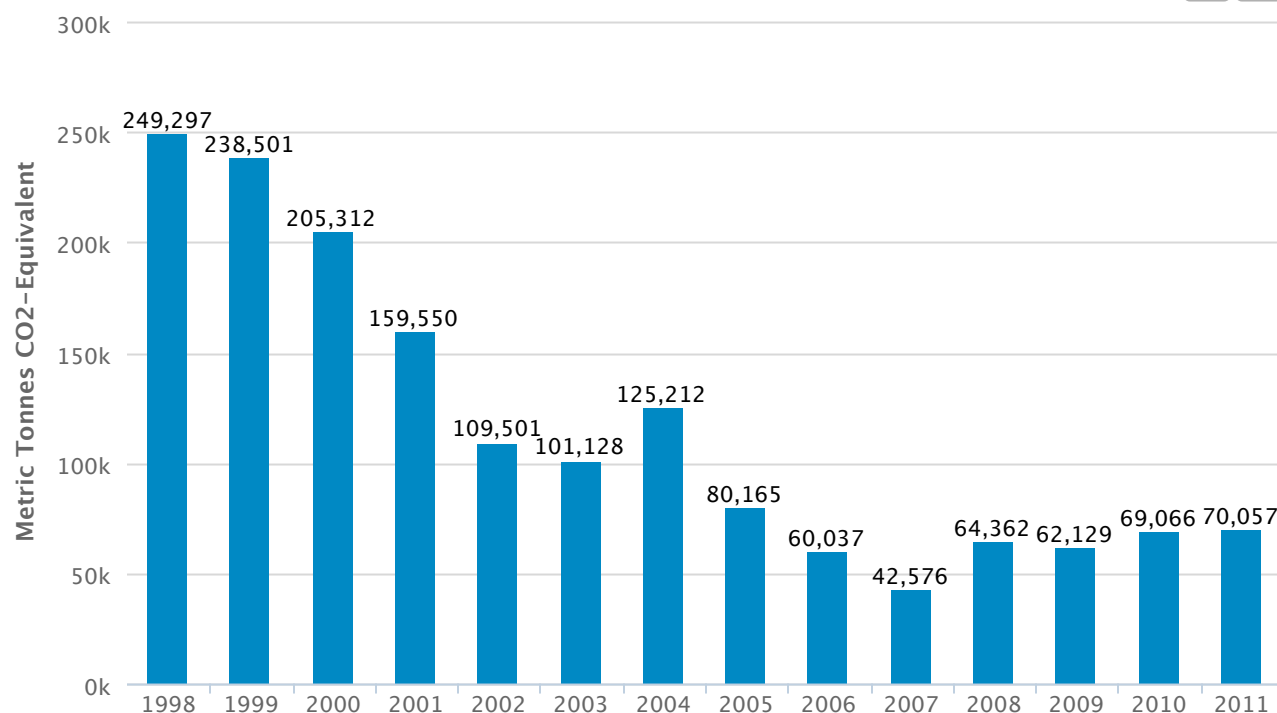
- We are fully committed to meeting the state's [Renewable Portfolio Standard \(RPS\)](#) requirement to deliver 33 percent renewable energy by the end of 2020. By the end of 2011, 19 percent of the electricity we delivered to our customers came from RPS resources, primarily from contracts with renewable energy companies.

Last year, we continued to offset all of the greenhouse gas emissions associated with the energy used in PG&E's offices and maintenance buildings by enrolling in our ClimateSmart™ program. In 2011, this amounted to more than 53,000 metric tonnes of CO₂ reductions. This

- As we move to a smarter grid that integrates more renewable energy sources, we are [piloting energy storage projects](#), including working toward siting of a large-scale Compressed Air Energy Storage project. We also installed a 2 MW advanced, large-scale sodium sulfur battery at our Vaca-Dixon substation.
- We have commissioned three [clean, highly efficient and flexible natural gas-fueled generating facilities](#) since early 2009.
- PG&E has a goal to [reduce energy use by 15 percent in MMBTUs](#) at PG&E offices and service yards by 2014 from a 2009 baseline, equivalent to avoiding approximately 4,000 metric tonnes of CO₂. In 2011, we reduced energy use by 4.8 percent—or about 383,150 MMBTUs—exceeding our 4.2 percent target. In 2012, our goal is to achieve an additional 3 percent reduction.
- PG&E continues to deliver emissions reductions as we advance the use of [lower-emission transportation technologies in our fleet](#). In 2011, PG&E’s use of natural gas in our fleet vehicles resulted in about 2,100 metric tonnes of avoided CO₂ emissions on a “well-to-wheel” basis. We expect further reductions as a result of increasing use of plug-in vehicle technologies.
- To better understand the greenhouse gas footprint of the [products and services we purchase](#), PG&E collaborated on a multi-year project with researchers at the University of California, Berkeley and Climate Earth. The study yielded greater visibility into the greenhouse gas emissions of our supply chain and identified opportunities to reduce emissions.

climate change education and demonstration program successfully concluded at the end of 2011 because its core goals were met. In particular, the program helped to inform key aspects of California’s climate change infrastructure, which will be needed as the state transitions to a low-carbon economy. This includes supporting and “road testing” important greenhouse gas offset protocols allowed under AB 32.

Sulfur Hexafluoride (SF₆) Absolute Emissions, 1998–2011



Since 1998, we have reduced our sulfur hexafluoride (SF₆) emissions rate by 86 percent and our total SF₆ emissions by 72 percent. SF₆ is an extremely potent greenhouse gas, approximately 23,900 times as potent as CO₂ on a per ton basis, and is used as an electrical insulating material in high-voltage circuit breakers and gas-insulated substations. PG&E achieved these reductions [in partnership with the U.S. EPA](#) by implementing SF₆ tracking, early detection measures for circuit breakers and an active breaker replacement program. Looking forward, we will comply with ARB's new SF₆ requirement that the maximum annual SF₆ emissions rate for PG&E's gas insulated switchgear decline from 10 percent in 2011 to 1 percent in 2020 and beyond; our 2011 emissions rate was 1.7 percent.

Engaging Our Customers

At PG&E, we continue to work with our customers to achieve energy savings and greenhouse gas emission reductions. We offer customers a full portfolio of options, including some of the nation's leading programs and incentives for [energy efficiency](#), [demand response](#) and [solar installation](#).

In 2012, PG&E proposed a [Green Option](#) program that will let customers support 100 percent renewable energy for an average of a few dollars a month. PG&E has asked the CPUC to approve the Green Option by early 2013.

Through PG&E's [Sustainable Communities efforts](#), we are helping cities and counties across our service area implement strategic energy and climate action planning through training, resources, funding and a dedicated team of community energy managers.

Through 2011, we provided aggregated energy consumption and emissions data to more than 200 cities and

nearly 40 counties—a significant portion of the communities in our service area. We have also helped local governments develop more than 200 greenhouse gas inventories (municipal and community) and nearly 50 climate action plans.

Our team of community energy managers provides on-the-ground support to help local governments reduce community-wide greenhouse gas emissions by taking advantage of PG&E programs and incentives. The team offers expertise on green building ordinances, making facilities more energy-efficient and increasing use of renewable energy.

For example, in 2011, we helped integrate energy strategies into the city of Chico's climate action plan and greenhouse gas reduction goals. We also helped identify untapped energy savings for the city through new data management and delivery pathways and we coordinated with the local university to assist with deploying a sustainable business program.

Much of this work is done in coordination with statewide efforts such as the [Statewide Energy Efficiency Collaborative \(SEEC\)](#), an alliance between California's investor-owned utilities and three non-governmental organizations ([ICLEI – Local Governments for Sustainability](#), the [Institute for Local Government](#) and the [Local Government Commission](#)). PG&E also actively supports the Beacon Award component of SEEC, which recognizes cities and counties that reduce greenhouse gas emissions and energy use.

Advancing Responsible Climate Change Policy Solutions

With reduced near term prospects for federal climate change legislation, PG&E has focused its advocacy at the state level for appropriate policies to address climate change.

At the state level, PG&E continues to participate in the ARB's development of the cap-and-trade program, guided by three overarching objectives: to achieve AB 32's greenhouse gas emissions reduction goals, manage costs for customers and create a program that can be integrated effectively with emerging regional, national and international programs. Features that will help mitigate costs to customers include allocating allowances to utilities for the benefit of their customers, access to a robust supply of high-quality offsets, robust market oversight and an allowance price containment reserve that will protect entities from high allowance prices.

We believe that a well-designed, [multisector](#) market-based program, combined with cost-effective renewable resources and energy efficiency, can put the state and the nation on a path to a low-carbon economy. Such an approach can reduce greenhouse gas emissions in a way that is economically sustainable and environmentally effective, while also spurring innovation and job creation.

At the federal level, PG&E remains engaged with coalitions and organizations such as the [Business Council for Sustainable Energy](#), [Coalition for Emission Reduction Policy](#), [Center for Climate and Energy Solutions](#), [Alliance to Save Energy](#), [Electrification Coalition](#), [Edison Electric Institute](#), [Bipartisan Policy Center](#) and the [U.S. EPA's Clean Air Act Advisory Committee](#) on climate and clean energy policy issues.

Understanding the Potential Physical Impacts to Our Business

PG&E commissioned its first technical study on climate change's potential physical impacts on our operations in 1989. In the last several years, California scientists and policymakers have increased their focus on the potential impacts of climate change to the physical environment. For example, in 2009, the State of California published a [Climate Change Adaptation Strategy](#), and in 2010, the California Adaptation Advisory Panel to the State of California published [Preparing for the Effects of Climate Change: A Strategy for California](#), both of which reference studies on the potential physical impacts of climate change in California.

These reports have identified three main potential risks for our sector: increased electricity demand from more extreme and frequent hot weather events; reductions in hydroelectric generation due to reductions in snowpack in parts of the Sierra Nevada mountains; and impacts to facilities due to sea level rise and increased storm surges.

Since 2008, PG&E has been investigating the potential physical risks of climate change to PG&E's system. A team has reviewed the most relevant scientific literature on sea level rise, temperature changes, rainfall and runoff patterns and storm frequency and intensity affecting California and the West to identify potential impacts on PG&E assets so that the affected business units can reevaluate the risks to facilities and develop the necessary adaptation strategies. PG&E also engages with leaders from business, government, academia and nonprofits to share information, best practices and plan for the future.

Planning for Potential Climate Change Impacts

During 2011, PG&E continued to develop strategies to mitigate the impact of our operations (including customer energy usage) on the environment and to plan for the actions that we will need to take to adapt to the likely impacts that climate change will have on our future operations.

With respect to electric operations, climate scientists project that sometime in the next several decades, climate change will lead to increased electricity demand due to more extreme and frequent hot weather events. 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—will help to offset the expected increased demand for electricity.

Climate scientists also predict that climate change will result in significant reductions in snowpack in parts of the Sierra Nevada Mountains. This impact could, in turn, affect PG&E's hydroelectric generation. At this time, PG&E does not anticipate that reductions in Sierra Nevada snowpack will have a significant impact on our hydroelectric generation, due in large part to our adaptation strategies. These strategies include maintaining higher winter carryover reservoir storage levels, reducing conveyance flows in canals and flumes during storm events and the winter period in response to an increased portion of precipitation falling as rain, and reducing discretionary reservoir water releases.

In 2011, Gary Freeman earned our [Richard A. Clarke Environmental Leadership Award](#) for his leadership in helping PG&E better understand the potential impacts of climate change on our hydroelectric operations.

PG&E is working with the U.S. Geological Survey (USGS) and the California Department of Water Resources to better understand the potential impacts of mountain snowpack loss on three Northern California low-elevation watersheds. Procedures for tracking and classifying climate change's potential to impact our lines of our business have been developed for sea level rise, temperature change and the effects of precipitation change.

Additionally, PG&E has developed a snowmelt runoff tracking procedure to identify and track climate change's potential impacts on small watershed areas, investigated Northern California's aquifers to better understand how they may respond to climate change's potential impacts and worked with local communities in Northern California to increase awareness of decreasing water flows so that these communities can explore local adaptation measures. PG&E has also presented and published several scientific papers on our research and investigations into how climate change is impacting the Northern Sierra Nevada and Southern Cascade watersheds that supply our hydroelectric system.

If PG&E is not successful in fully adapting to projected reductions in snowpack over the coming decades, it may become necessary to replace some of our hydroelectric generation with electricity from other sources.

Scientists also project that climate change will cause sea levels along California's coast to rise within this century, which may result in higher flooding potential at PG&E's coastal facilities. In light of this long-term risk, PG&E is participating in the Adapting to Rising Tides project, in which the San Francisco Bay Conservation and Development Commission is partnering with the National Oceanic and Atmospheric Administration Coastal Services Center to work with Bay Area communities on planning for sea level rise.

Natural Resource Stewardship

As one of California's largest land owners, 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, managing watershed lands that PG&E has committed to preserving in perpetuity, maintaining forest lands to minimize the threat of wildfire and managing vegetation around our overhead power lines so that customers experience fewer outages.

As we upgrade and maintain gas and electric facilities to meet customer needs, we work through a variety of programs and partnerships to ensure that we are able to deliver safe and reliable service while protecting wildlife and other important natural resources.



An Innovative Strategy for Protecting Habitat and Species

PG&E's service area is home to hundreds of species that are protected by the federal and state Endangered Species Acts. In the late 1990s, we began pursuing [Habitat Conservation Plans \(HCPs\)](#) to avoid, minimize and mitigate impacts to these sensitive species.

In 2011, we marked the fourth year of our San Joaquin Valley Operations and Maintenance HCP, which is a 30-year permit covering our operations and maintenance activities and minor new construction in the region.

The HCP covers 23 wildlife and 42 plant species and enables PG&E to maintain our operations in a way that protects these species and the habitats in which they thrive. Highlights for 2011 included training 1,700 employees, as well as reaching more than 650 contractors



Through PG&E's Habitat Conservation Plan, we strive to avoid and minimize impacts to sensitive species, such as burrowing owls.

with compliance reminders and training materials.

We are currently developing two additional HCPs, one for the San Francisco Bay Area region and another “multi-region” HCP for five other regions within PG&E’s service area. When these permits are completed and approved, they will benefit our customers by allowing PG&E to maintain our facilities more efficiently while also benefitting the sensitive species that inhabit these regions. The HCPs also promote a more holistic view of habitat conservation, since mitigation to compensate for impacts is done on a landscape, rather than parcel-by-parcel, basis.

PG&E strives to avoid and minimize impacts to habitats and species wherever possible. When impacts cannot be avoided, we work in partnership with local land trusts and land management organizations to compensate appropriately, as required by law (and our HCP permit). While this mitigation is required, doing so in concert with broader conservation goals is voluntary. Typically, our strategy is to invest in parcels that contribute to larger landscape conservation goals and benefit a broad set of species, rather than focusing on smaller, separate parcels.

The [Center for Natural Lands Management](#) procures, holds title to and manages the mitigation land that PG&E is required to provide under the HCP permit, working closely with PG&E and under the regulatory oversight of state and federal agencies. As part of the arrangement, PG&E established an endowment with the Center that produces a revenue stream that supports the costs of implementing a management plan in perpetuity for the lands.

This map shows areas where we have acquired lands or conservation easements or purchased habitat mitigation credits as part of our San Joaquin Valley Operations and Maintenance HCP, totaling nearly 420 acres.



The map also shows an additional area that we added to our mitigation portfolio in 2011—Tivy Mountain East, a 24-acre site in Fresno County that contains habitat for the threatened Valley Elderberry Longhorn Beetle. The site is owned by the Sierra Foothill Conservancy and located adjacent to lands protected by the Bureau of Land Management. The conservation easement will protect the land from commercial development or use. PG&E expects to complete the transaction by the end of 2012.

Additional acquisitions are expected during 2012 to complete the first five years of the San Joaquin Valley O&M HCP advance mitigation. Pending approvals are filed with both the [California Department of Fish and Game](#) and the [U.S. Fish and Wildlife Service](#).

Sustainably Managing Our Watershed Lands

PG&E’s land stewardship efforts range from sustainable forestry and fire prevention on PG&E-owned forest lands to the permanent protection of more than 140,000 acres in collaboration with the [Pacific Forest and Watershed Lands Stewardship Council](#).

Sustainable Forestry and Fire Prevention

Creating healthy forests through sustainable practices on PG&E’s 52,000 acres of forest lands has long been a priority. Healthy forests minimize fire danger and, as a result, better protect the public, important infrastructure and habitat needed by plants and animals to survive and flourish. Healthy forests also help

address climate change by sequestering substantial amounts of carbon dioxide from the atmosphere.

Key elements of our sustainable forestry efforts include maintaining lands to help prevent the spread of wildfires, engaging nearby communities in wildfire prevention programs and using seeds collected from our seed orchard for restoration of healthy, diverse and productive forests.

In 2011, PG&E continued to help restore native aspen stands in the forests we manage. Aspen trees help indicate the health of a watershed and provide important habitat for many diverse wildlife and plant species; they also serve as natural “fuel breaks” from wildfires. In fact, PG&E has developed a program to guide our aspen enhancement efforts across our properties. At each site, PG&E manually and mechanically removes encroaching conifers from within and adjacent to aspen stands. Doing so allows additional sunlight to reach the forest floor and enables mature aspen trees to produce new sprouts and regenerate enhanced aspen stands.

Last year, PG&E restored approximately 80 acres of aspen stands in eastern Shasta County, the largest area of aspen stands that we have focused on to date.

Our Land Conservation Commitment

As part of our Land Conservation Commitment, PG&E continues to collaborate with the [Pacific Forest and Watershed Lands Stewardship Council](#) to permanently protect some of California’s most beautiful watershed lands—totaling more than 140,000 acres.



Before (top) and after photos show the results of PG&E’s efforts to restore native aspen stands.



At an elevation of 5,000 feet, Mountain Meadows is the uppermost reservoir in PG&E's North Fork Feather River Hydro System.

Working with the Stewardship Council, PG&E is donating conservation easements and/or ownership in watershed lands to public agencies or qualified conservation organizations to enhance or preserve numerous beneficial uses, including natural habitat for wildlife, fish and plants; open space; sustainable forestry; agriculture; outdoor recreation by the public; and historical values.

The Stewardship Council was created in 2004 as an independent organization to oversee the implementation of PG&E's Land Conservation Commitment. This oversight includes the development of a Land Conservation Plan that describes the long-term management objectives for the watershed lands and provides recommendations for fee and conservation easement donees to receive interests in the lands. PG&E funds the Stewardship Council annually and holds one seat on the Council's Board of Directors.

In 2011, the Stewardship Council recommended that PG&E donate more than 18,000 acres to public agencies or qualified conservation organizations. Additionally, they recommended donees for conservation easements on another 23,000 acres; PG&E will continue to hold title to these lands, subject to the conservation easements.

PG&E has initiated negotiations with many recommended donees. The Stewardship Council will continue to recommend donees on the remaining acres.



PG&E and the Stewardship Council continue to connect disadvantaged kids with the outdoors through the [Youth Investment Program](#). Since 2006, the Stewardship Council has awarded more than \$12 million to over 180 organizations, affecting the lives of about 260,000 youth in PG&E's service area.

Through these grants, the Stewardship Council has supported projects that include:

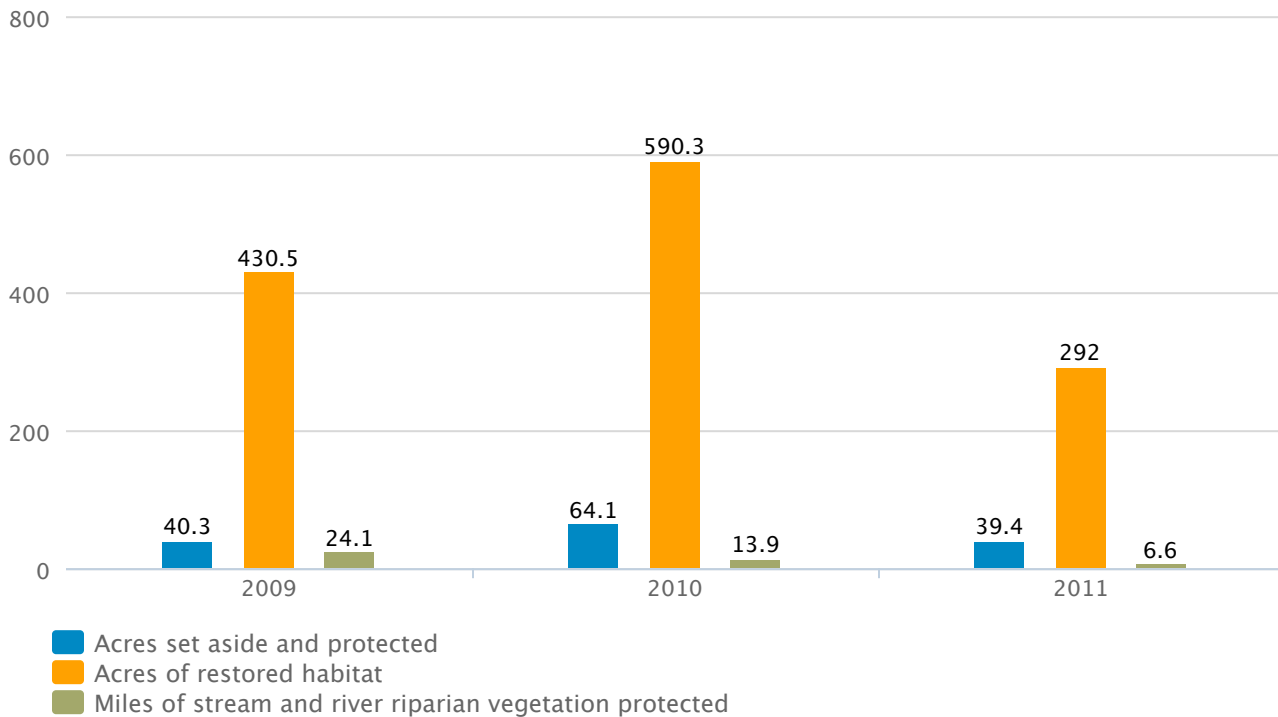
- Investing in more than 25 community park projects across California to rebuild open space and outdoor play areas;
- Launching a pilot program to recognize teachers who have connected youth to the outdoors in exemplary ways; and
- Hosting regional gatherings for outdoor education providers.

Moving forward, the non-profit [Foundation for Youth Investment \(FYI\)](#) will continue the work of the Youth Investment Program. FYI's mission is to develop and transform underserved youth by investing in effective programs and creating strategic initiatives that connect kids to the outdoors. In 2011, the Stewardship Council provided FYI a \$600,000 grant to develop an Outdoor Educators Program and agreed to transfer administration of the remaining grantmaking programs to FYI beginning in 2012.

Habitat Mitigation and Restoration

PG&E carries out a variety of habitat mitigation and restoration activities to fulfill state and federal regulatory requirements and to support voluntary environmental initiatives. Last year, our efforts enhanced or restored more than 330 acres of habitat and six miles of stream and river riparian vegetation.

Protected and Restored Habitat [1]



¹ PG&E undertook these activities to meet various regulatory requirements, with the exception of 2.5 acres of PG&E-owned property that PG&E voluntarily restored in 2009.

Under the direction of the federal Endangered Species Act, PG&E protects the Valley Elderberry Longhorn Beetle (VELB), which relies solely on elderberry shrubs for food, shelter and reproduction. To meet this commitment, we proactively created a VELB Conservation Program in 2002 and evaluate and approve each elderberry shrub before trimming or removal.

To date, to compensate for impacts to beetle habitats from our tree trimming, we have permanently protected more than 975 acres of high-quality beetle habitat, working in partnership with groups such as [The Nature Conservancy](#), [Trust for Public Land](#) and other organizations.

PG&E field personnel and contractors are required to complete annual environmental and [Habitat Conservation Plan](#) training with a focus on environmental compliance and protecting riparian habitat, migratory birds and their nests, and the VELB.



Photo of Valley Elderberry Longhorn Beetle.

Protecting Birds

More than 300 species of migratory birds live within PG&E's service area in Northern and Central California, either on a permanent basis or during semi-annual migration along the "Pacific Flyway." When these birds perch on power lines or utility poles, they can be electrocuted and cause electric outages and wildfires. Birds can also collide with power lines while in flight.

Under state and federal laws, PG&E has an important responsibility to protect birds. Doing so also improves the reliability of our electric service.

In 2002, PG&E entered into an agreement with the U.S. Fish and Wildlife Service to implement various bird protection measures. When the initial agreement expired in 2007, we voluntarily adopted an [Avian Protection Plan](#). Designed to protect migratory, threatened and endangered birds while improving system safety and electric reliability for our customers, this plan is one of the most comprehensive in the nation.

To help ensure we meet our compliance obligations, we offered a comprehensive training in 2011 to 5,500 employees and contractors. The training included guidance on how to make poles and equipment bird-safe and how to properly report and track all avian electrocutions or collisions.



At the Don Pedro Recreation Area, PG&E installed several nest platforms to protect large birds, such as osprey.

Since 2002, PG&E has made approximately 20,400 existing utility poles and towers bird-safe. In 2011, we narrowly fell short of our annual target for these annual retrofits (see chart below), due to the need to focus on other operational priorities.

Since 2002, we have also retrofitted approximately 22,900 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.

We also continue to take steps to protect birds at our facilities, such as surveying substations where burrowing owls reside. In fact, several owl families have made their homes in the artificial nest sites that we enhanced at our Weber substation in Stockton in 2010.

In 2011, we also continued our Owl Safe Program, which encourages the installation of owl nesting boxes mounted on dedicated poles, rather than utility poles. PG&E presented

the [Lodi-Woodbridge Winegrape Commission](#) with a \$25,000 grant to install these nesting boxes in vineyards, where owls act as natural pest control. Given the level of customer interest, funding for this program continued in 2012.



Using helicopters, PG&E crews safely deployed “bird flight diverters” on 100 spans of electric line near the Woodbridge reservoir. These devices have proven to reduce waterfowl collisions with power lines.

Protecting Condors in Big Sur



In 2011, PG&E worked with a non-profit partner and government agencies to complete a major project to protect an endangered species. The \$4.2 million project rerouted high-voltage power lines underground in a remote area near Big Sur in Monterey County, serving our customers in the area while offering vital protection to the endangered California condor.

With a wingspan of 9.5 feet and weight of up to 29 pounds, the California condor is North America's largest flying land bird. Dating back more than 2.5 million years, the California condor nearly became extinct in the 1980s but its numbers are now climbing due to captive breeding and conservation programs. In particular, the [Ventana Wildlife Society](#) has been releasing captive-bred California condors into the wild near the coast of Big Sur since 1997.

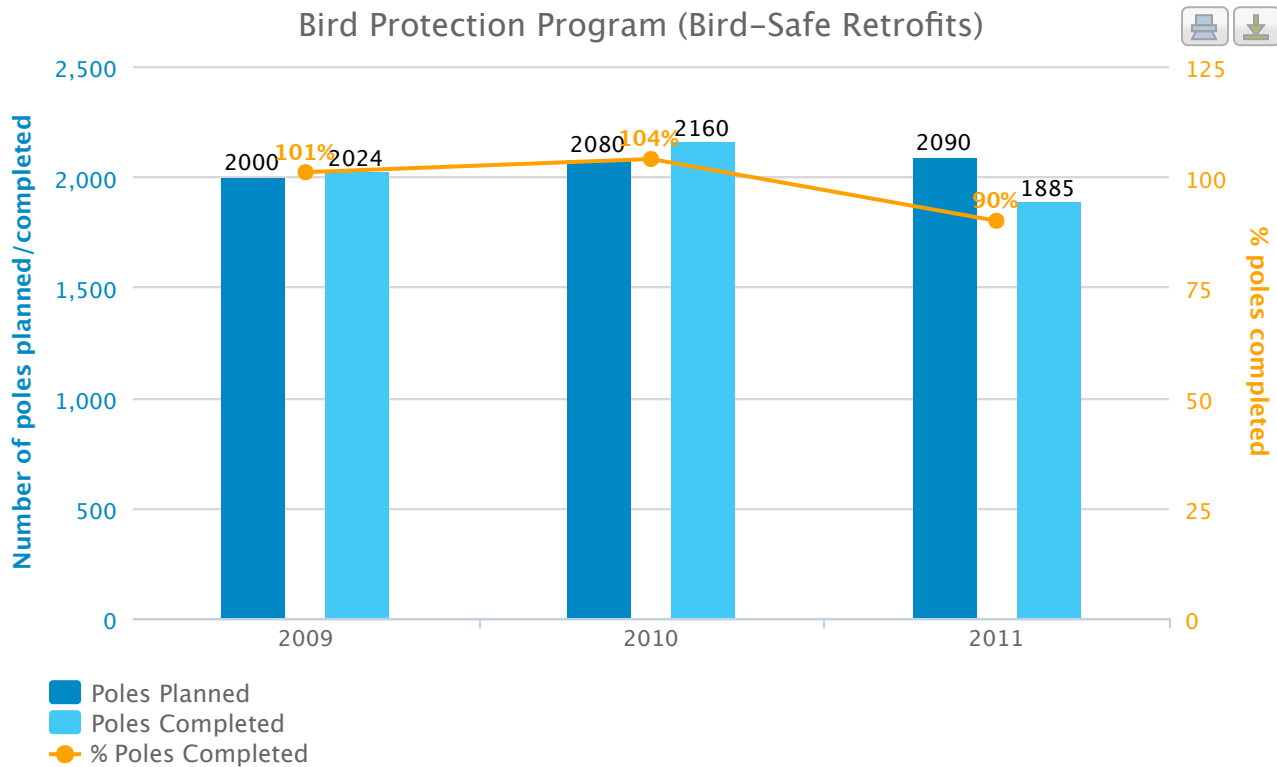
However, electric power lines in Big Sur posed a risk to the birds. In particular, a three-mile electric distribution line owned by PG&E was responsible for three condor fatalities since 2001. Working with the Ventana Wildlife Society, PG&E attempted to reduce risk to the birds by hanging “bird flight diverters” (circle-like rings intended to serve as a visual alert) on the lines, but it became clear that a more sustainable solution was required.

In 2011, after an extensive permitting process with state and federal regulators and ongoing collaboration with the Ventana Wildlife Society, PG&E successfully re-routed the three-mile electric line underground. The project involved preparing an underground trench and conduit, then pulling the wire and energizing the new line. PG&E then removed the above-ground conductors and poles.

Doing so removes the threat to the condors and will provide better, more reliable service to customers by protecting the line from the fires and harsh storms that can occur along the remote Big Sur coast. When installing the underground line, PG&E also avoided harming plants that host endangered butterflies in the area.

PG&E continues to support the Ventana Wildlife Society's condor recovery program, contributing \$60,000 over the past two years.

[View a video on this pioneering project.](#)



Vegetation Management

Each year, PG&E manages more than 50 million trees along high-voltage transmission and distribution power lines across our service area for public safety and electric reliability. To prevent trees from growing or falling into power lines, we inspect all overhead power lines and trim or remove more than one million trees each year deemed to be a potential hazard. The work is performed by 350 consulting utility arborists and foresters and more than 1,200 Cal OSHA-qualified line clearance contractors.

PG&E recognizes the important value of trees, and we do everything possible to preserve them while maintaining safe and reliable electric service. However, trees that conflict with power lines can present risks to public safety and are a leading cause of electric power outages. Such conflicts can result in injuries to the public, as well as wildfires that damage property and the environment. Additionally, because PG&E's transmission lines are part of the interstate grid, PG&E's vegetation management program promotes the stability of the electric grid across the



Western United States and Canada and lowers the likelihood of a widespread blackout.

PG&E is required by law to keep the lines clear. The North American Electric Reliability Corporation's Standard FAC-003-1 applies to bulk transmission lines and is intended to prevent a large-scale transmission outage. This national standard was developed in response to the Northeast blackout of 2003 and subsequent Congressional mandates. It requires that transmission line owners like PG&E have a vegetation management program to maintain minimum clearances, a mitigation plan and process for dealing with imminent threats.

As with any work, PG&E makes every effort to work with landowners and public agencies to resolve concerns to reach mutually agreeable solutions to meet the new federal standards.

Our efforts also include adhering to industry standards for utility arboriculture and maintaining a robust public education program. For example, we showcase our nationally recognized "Right Tree, Right Place" campaign through community events such as fairs and home and garden shows, tree plantings and partnerships with cities, agencies, fire safe councils and universities. This campaign helps educate the public on the proper selection of trees under or near power lines.

PG&E has been recognized by the National Arbor Day Foundation as a [Tree Line USA](#) recipient for 17 consecutive years for demonstrating practices that achieve the dual goals of safe and reliable electric service while protecting and enhancing urban forests.

Guide to Small Trees Near Distribution Lines

To order call 1-800-743-5000 or email RightTreeRightPlace@pge.com.

Specify Area:

- Northern California
- Bay Area and Inland
- Central California



PG&E educates the public on “power line friendly” tree planting near distribution lines, planting for energy efficiency and related topics. More broadly, PG&E also communicates the importance of keeping vegetation a safe distance from transmission lines.

Water Conservation and Management

Water is an integral resource for the utility industry and is used in many ways. Increased demand and limited water resources have led PG&E and other utilities to identify and implement water use reduction strategies.

PG&E is taking steps to conserve and protect water in our facilities and operations. In 2011, we made progress toward our five-year water use-reduction goal of 20 percent for our offices and service yards, compared to a 2009 baseline. PG&E also uses air rather than water to cool all but one of its thermal power plants and has incentives to help customers conserve water—which not only lowers their bills and helps the environment, but reduces energy consumption.



Taking a Sustainable Approach

At PG&E, we are working to use water in a more sustainable manner in our facilities and operations. Taking a sustainable approach allows us to ensure we meet our future business needs, while also addressing near-term opportunities for efficiency and cost savings.

PG&E's water conservation and management efforts span a range of areas:

- Reducing water consumption at PG&E offices and service yards
- Using air for cooling (versus once-through “wet” cooling) at repowered and new generation facilities
- Developing plans to manage the potential future impacts of climate change on our hydroelectric system
- Considering freshwater usage when evaluating potential third-party suppliers of electricity
- Working with non-electricity generation suppliers to reduce their water use
- Helping customers reduce their water use

CARBON DISCLOSURE PROJECT

In 2011, PG&E voluntarily responded to the [Carbon Disclosure Project's \(CDP\)](#) annual information request on water. This request was made on behalf of more than 350 investors around the world representing \$43 trillion in assets. The CDP once again recognized PG&E for demonstrating best practice among major companies worldwide.

- Using best management practices in maintenance and construction projects to protect water quality.

Water Use Statistics

PG&E has no power plants that use freshwater for once-through cooling; however, we have one power plant with a once-through cooling system that uses saltwater. PG&E does use freshwater to support the internal operations of our plants, but this, by comparison, represents a much smaller volume of water. As discussed more fully below, PG&E's largest use of freshwater is the generation of hydroelectricity; this is not considered a consumptive use of water because the water runs through the turbines and returns to the river or stream.

We will continue to expand the scope of water use included in our water footprint. For example, as we expand the metering and tracking of our facility water use, we will include this usage in our summary of water use statistics.

Water Use Statistics

	2009	2010	2011
Water Withdrawal (Saltwater and Freshwater) (thousand gallons)			
Once-Through Cooling (Saltwater)			
Diablo Canyon Power Plant ¹	802,067,000	856,154,000	863,753,000
Humboldt Bay Power Plant ²	24,365,000	18,145,000	N/A
Domestic and Process Water (Freshwater)			
Diablo Canyon Power Plant	134,440	138,093	145,546
Freshwater ³	14,640	17,650	13,410
Seawater Reverse Osmosis Product Water	119,800	120,443	132,136
Humboldt Bay Power Plant	7,195	5,808	N/A
Humboldt Bay Generating Station ^{1,2}	N/A	39	281
Gateway Generating Station ^{1,4}	17,615	16,769	20,339
Colusa Generating Station ^{1,5}	N/A	2,063	2,810
California State University, East Bay Fuel Cell ^{1,6}	N/A	N/A	699
San Francisco State University Fuel Cell ^{1,6}	N/A	N/A	419
Corporate Real Estate Facilities (Freshwater)			
Offices and Service Yards ⁷	154,100	129,200	121,400
Public Water System Usage (Freshwater)			
Designated Facilities ⁸	N/A	N/A	55,324
Wastewater Discharged (Saltwater and Freshwater) (thousand gallons)			
Once-Through Cooling (Saltwater)⁹			
Diablo Canyon Power Plant	802,067,000	856,154,000	863,753,000
Humboldt Bay Power Plant	24,365,000	18,145,000	N/A

	2009	2010	2011
Domestic and Process Water (Freshwater)			
Diablo Canyon Power Plant			
Permitted Discharge	124,385	123,498	134,345
Humboldt Bay Power Plant	15,685	11,793	N/A
Sanitary Sewer	3,595	3,108	N/A
Permitted Discharge	12,090	8,685	N/A
Humboldt Bay Generating Station			
Sanitary Sewer	N/A	39	137
Gateway Generating Station			
Sanitary Sewer	7,552	7,452	10,115
Colusa Generating Station ¹⁰	N/A	N/A	N/A

¹ Net operating capacity on December 31, 2011: Diablo Canyon: 2,240 MW; Gateway Generating Station: 530 MW; Colusa Generating Station: 530 MW; Humboldt Bay Generating Station: 163 MW; CSU-East Bay Fuel Cell: 1.4 MW; San Francisco State Fuel Cell: 1.6 MW.

² The Humboldt Bay Power Plant (Humboldt Bay) facilities, two operating fossil fuel-fired plants and two mobile turbines, were retired at the end of September 2010. The Humboldt Bay Generating Station, which does not use once-through cooling, became operational in September 2010.

³ Freshwater sources were well water and creek water through June 2008 and are now solely well water for back-up and emergency purposes.

⁴ The Gateway Generating Station, which does not use once-through cooling, became operational in January 2009.

⁵ The Colusa Generating Station, which does not use once-through cooling, became operational in December 2010.

⁶ The Utility owns and operates three fuel cell sites in the Bay Area that became operational in September 2011 and have a combined capacity of 3 MW.

⁷ This figure represents the water supplied to 125 of the 194 offices and service yards managed by the Utility's Corporate Real Estate Department for the 12-month period from October to September. These facilities represent the scope of operations covered by PG&E's water reduction target in 2011. Water usage reported for 2009 and 2010 has been adjusted to reflect an increase in the number of sites measured from 78 sites in the 2009 report and 91 sites in the 2010 report. We expect to report water consumption from additional facilities in subsequent sustainability reports, consistent with our plan to encompass more facilities in our water reduction target.

⁸ These facilities operate public water systems which are metered in accordance with the California Code of Regulation, Title 22, Division 4, Chapter 16, Article 3, Section 64561 (a) and (b).

⁹ These are estimated figures as PG&E only measures water withdrawal associated with once-through cooling.

¹⁰ Colusa Generating Station uses a zero liquid discharge system. A septic system is used to manage sanitary waste.

Use of Saltwater for Once-Through Cooling

PG&E owns and operates one power plant that uses saltwater for once-through cooling to condense steam to water in the electricity generating process. [Diablo Canyon](#) is a 2,240 MW nuclear power plant with a maximum discharge limit of 2.5 billion gallons per day. The water discharge limit is set by the facility's Clean Water Act permit.

PG&E closely monitors the marine environment at its Diablo Canyon Power Plant by conducting regular studies and sampling required under the plant's Clean Water Act permit. The marine studies at Diablo

Canyon, ongoing since the mid-1970s, represent one of the largest databases of intertidal marine data in the United States.

The Clean Water Act requires that cooling water intake structures at electric power plants, such as Diablo Canyon, reflect the best technology available to minimize adverse environmental impacts. In April 2011, the U.S. EPA published draft regulations that propose specific reductions for impingement (which occurs when larger organisms are caught on water filter screens) and provide case-by case site specific assessment to establish compliance requirements for entrainment (which occurs when organisms are drawn through the cooling water system). In June 2012, U.S. EPA requested comments on proposed revisions to the draft regulation that would provide additional flexibility for impingement compliance. The final regulations are expected in 2013.

Additionally, the California State Water Resource Control Board (State Board) [adopted a policy](#), effective in 2010, regulating the use of once-through cooling at existing power plants and establishing a compliance schedule to phase out once-through cooling at most facilities. The policy acknowledges the unique contributions of nuclear plants to both baseload power and meeting the state's greenhouse gas reduction goals, and allows for alternative compliance requirements for these facilities after a review of compliance costs and factors such as engineering and permitting constraints, as well as any adverse environmental impacts of a cooling tower installation. If the State Board allows a nuclear plant to comply through alternative requirements, the policy requires that the impacts of the plant be mitigated through projects that increase marine life near the facility.

For new generation projects, PG&E supports efforts to transition away from once-through cooling and is using alternative technologies that rely on air for cooling at its repowered and new facilities. For example, we are using new advanced reciprocating engine technology at the repowered 163 MW Humboldt Bay Generating Station. Because this plant is cooled with air radiators using a closed loop liquid coolant, it requires minimal water use.

PG&E is using another dry cooling technology, an air-cooled condenser, at the Gateway and Colusa Generating Stations. The Gateway Generating Station is a state-of-the-art 530 MW combined-cycle natural gas power plant with 50 MW peaking capacity that uses approximately 97 percent less water and discharges 98 percent less wastewater than a traditional "wet" cooled plant. The similarly designed 530 MW Colusa Generating Station with 127 MW peaking capacity also uses dry cooling—a zero liquid discharge system that recycles wastewater.

In addition, PG&E owns and operates fuel cell sites in the San Francisco Bay Area that became operational in September 2011 and have a combined capacity of 3 MW: 1.4 MW at California State University, East Bay and 1.6 MW at San Francisco State University. All require freshwater for the electrochemical energy generation process.

Freshwater Consumptive Uses

PG&E consumes some freshwater for the internal operations at the four power plants we own and operate. These operations are largely closed-loop systems that minimize the amount of water consumed. The

systems draw from on-site groundwater, irrigation canal water and/or municipal water. Additionally, the Diablo Canyon Power Plant uses freshwater generated through seawater reverse osmosis. The freshwater is used to generate steam, cool auxiliary equipment, support fire water systems and supply drinking water at the power plants, among other uses. To ensure operational efficiency and maintain plant chemistry, we closely monitor these internal systems to ensure they are watertight, thus reducing consumptive use.

PG&E also purchases a significant portion of its delivered electricity from third-party suppliers. Some of this purchased electricity may come from conventional power generation facilities that use freshwater for once-through or other wet cooling technologies.

We also consume freshwater in our office buildings for kitchens and bathrooms, landscape irrigation and cooling towers associated with heating, ventilation and air conditioning systems. Our gas and electric transmission and distribution facilities consume freshwater as well for operation, maintenance and construction activities. These include washing electric circuit insulators, cleaning vehicles, controlling dust and conducting pipeline and other operations. Water is also used as part of ongoing environmental remediation.

In 2011, PG&E used a significant amount of water to perform hydrostatic testing on more than 160 miles of its gas transmission pipelines to verify the safety and reliability of its natural gas transmission system. PG&E plans to test hundreds of additional miles over the next several years.

[Hydrostatic pressure testing](#) involves filling a section of pipe with water, pressurizing it to a much higher level than the pipe operates with natural gas, then monitoring the pipe for at least eight hours. Any pipe sections that do not pass are repaired and retested. Following a completed test, the water is sampled and analyzed to verify that applicable discharge limits are met. Water is then discharged either under permit from a Regional Water Quality Control Board or the local sanitary sewer agency.

In 2011, PG&E also began tracking groundwater use at fifteen of its facilities in compliance with California's requirements for permitted public water systems.

Freshwater Non-Consumptive Uses

PG&E's [hydroelectric power plants](#) are largely non-consumptive. After water passes through turbines to produce electricity, it is returned to the river.

Of PG&E's 68 hydroelectric power houses, 24 are classified as "run-of-the-river." This refers to hydroelectric plants that operate on water as it is available from the natural flow of a stream without the need for storing the water. The other units draw water from reservoirs. Some experts characterize the evaporation that naturally occurs from reservoirs as water consumption. PG&E will continue to monitor such reporting developments as we further quantify our water conservation and management efforts. Evaporation represents a small percentage of the total water that flows in the watersheds where PG&E operates hydroelectric facilities.

PG&E also uses water for energy storage to help balance daily variations in electric demand at the [Helms](#)

[Pumped Storage Project](#), a site more than 1,000 feet inside a solid granite mountain. With a total output of 1,212 MW, the facility alternately draws water from an upper reservoir to produce electricity when demand is high, and pumps it back when demand is low for reuse during the next high-demand period.

Water Conservation in Our Facilities

PG&E set a [five-year goal to reduce water usage](#) in offices and service yards by 20 percent by the end of 2014, with 2009 as the baseline year.

In 2011, we reduced water use by 6.0 percent—or 7.8 million gallons—at 125 offices and service yards, exceeding our 5.7 percent target. To achieve these reductions, we reduced landscape water use through enhanced maintenance and the installation of “smart” irrigation controllers at seven additional sites to govern the use of sprinkler systems.

We also replaced landscaping at our Sacramento and Redding service centers with a design that includes native drought-resistant plants and materials that require no irrigation. In our headquarter complex we installed automatic faucets and low-flow valves on plumbing fixtures. In 2012, our goal is to achieve an additional 2 percent reduction at an expanded set of 135 sites.

Helping Customers Reduce Water Use

By encouraging energy efficiency, PG&E also enables our customers to reduce their water use. As a demonstration of potential water savings from our energy efficiency programs, PG&E analyzed six of the more common water-saving technologies incentivized as part of our 2011 energy efficiency portfolio and found that they equated to approximately 850 million gallons of water savings per year, which is equivalent to the annual water consumption of approximately 5,000 California households. We estimate that these technologies will also save customers nearly 1 million kWh and 2 million therms of energy in the first year after installation.

Ninety-two percent of these water savings resulted from programs for residential customers in 2011, both where we directly installed the water-saving devices and where we provided rebates to lower the cost of the devices. Through PG&E’s [Energy Savings Assistance Program](#), we installed hundreds of thousands of low-flow showerheads and faucet aerators at no cost to low-income homeowners and renters; we also made other improvements such as caulking and lighting upgrades. In addition, PG&E issued more than \$6.5 million in residential rebates for dishwashers and [clothes washers](#). The rebates for clothes washers were issued through a collaborative program with 30 local water agencies, where customers received a combined rebate from PG&E and their local water agency.

The remaining eight percent of water savings resulted from [commercial and industrial customers](#). We helped save these customers water by installing or providing rebates for low-flow showerheads, faucet aerators, dishwashers, clothes washers, ozone laundry equipment and ice machines. The laundry equipment uses ozone as a cleaning agent in lieu of hot water, while the ice machines use air instead of water to keep the ice cool.

Since 2004, PG&E has hosted an annual [Water Conservation Showcase](#) in San Francisco that brings together experts and innovative products and services to explore new policies, strategies and technologies to conserve water. At the event, industry experts cover a wide range of topics related to building and landscape water savings for both residential and commercial building projects.

The event is held in collaboration with the U.S. Green Building Council's Northern California Chapter and the East Bay Municipal Utility District. The attendees—which include architects, engineers, building owners and operators, manufacturers and government employees—see new technologies firsthand through a range of exhibits.

PG&E's [Pacific Energy Center](#) also provides workshops and classes during the year on various topics related to water conservation and energy efficiency. This includes a new course added in 2011 on how to provide a water audit for small to medium sized commercial facilities.



Photo: Joseph Dannels
Since 2004, PG&E has hosted an annual Water Conservation Showcase in San Francisco.

Managing Storm Water Run-Off and Protecting Species

In California, storm water run-off can pose an environmental threat, with precipitation transporting pollutants into nearby lakes, rivers, wetlands and coastal waters. Some of these sites are also home to sensitive plants and animals.

PG&E has developed a comprehensive program to comply with state permitting requirements for storm water management associated with construction projects. The stringent requirements call for PG&E to implement storm water pollution prevention plans and best management practices commensurate with a project's risk level to minimize potential impacts to water quality.

These best management practices protect water quality, as well as plants and animals. They include using reusable fencing to prevent sediment from entering streams and waterways and deploying active treatment systems that remove sediments and other pollutants from collected storm water at construction sites.

We also use portable vehicle wash stations to prevent the spread of plant diseases and invasive weeds and install biological exclusion fences to prevent sensitive species, such as the California red-legged frog and the California tiger salamander, from entering construction sites. We select and implement best

management practices on a site-specific basis.

PG&E has developed a program to protect water quality at construction project sites that do not trigger state permitting requirements.

PG&E is also focused on best practices for managing storm water at its power plants. For example, at our Humboldt Bay Generating Station, storm water is managed through a process that takes advantage of plants and microbes to filter and clean the storm water, thereby protecting water quality.

[Learn more about how we are minimizing our impacts to natural resources.](#)

Greening Our Fleet

PG&E owns and operates a fleet of approximately 12,000 vehicles and ancillary equipment to provide safe, reliable and efficient gas and electric service to customers, including emergency response capabilities. In fact, each year, our employees drive more than 110 million miles in PG&E vehicles to serve our customers.

For more than two decades, we have actively incorporated more efficient and sustainable transportation technologies into the fleet. Today, we are investing in a range of electric, natural gas and hybrid vehicles and other high-efficiency technologies to reduce emissions, operating costs and dependency on petroleum-based fuels.



PG&E's fleet includes North America's first all-electric powered bucket truck.

Meeting Federal and State Requirements

PG&E remains focused on meeting aggressive federal and state vehicle emission and alternative fuel requirements. Federal regulations require that 90 percent of all light-duty vehicles purchased for our fleet be capable of using an alternative fuel—either compressed natural gas or electricity—provided the technology is commercially available. In addition, state air quality regulations require us to replace different categories of vehicles and equipment—such as portable engines, forklifts, dump trucks and heavy-duty construction equipment such as line trucks and tractors—within specific timeframes.

We are working to meet these requirements in a way that fosters innovation and economic vitality. This includes partnering with vehicle manufacturers to design and test new types of vehicles and technologies. We are also equipping selected units with GPS systems to increase the efficiency of our dispatching system and deploying lower-emitting vehicles in locations with poor air quality.

PG&E also continues to implement a plan, approved in 2009 by the California Air Resources Board, which will reduce air emissions five years earlier than required by regulation. By 2017, all heavy-duty diesel vehicles in PG&E's fleet will meet or exceed 2010 model year tailpipe emission standards. PG&E plans to continue its leadership in this area, delivering even better results as we continue to advance electric-based transportation technologies.

Exploring the Promise of Extended-Range Electric Pickups

“Extended range” electric vehicles occupy a middle ground between traditional hybrids and 100 percent electric vehicles. As a result, they offer many of the environmental benefits of an electric vehicle, paired with the flexibility to travel longer distances when necessary.

In 2011, PG&E reached [a major milestone with VIA Motors](#), a vehicle manufacturer that delivered two “post-prototype” extended range pick-up trucks to PG&E. The trucks can run on electric power for the first 40 miles and then use a smaller gasoline-operated engine to generate any additional electricity needed to finish a trip, resulting in fuel savings and fewer emissions.

Based on the daily miles being driven by these types of vehicles in our operations, we expect the extended range trucks to average nearly 100 miles per gallon. The vehicles also offer exportable power, which can be used by PG&E crews to run tools and lights.

Pacific Gas and Electric Company is the first utility to field-test the trucks and is sharing feedback with VIA to improve the design of the next generation of these trucks. PG&E will purchase up to six of the trucks when they go into production in 2012. If testing results are positive, additional units will be added to our fleet.

Our fleet also includes more than 25 Chevrolet Volts, another extended range vehicle. The Volt travels its first 35 miles in electric mode and then switches to a gas-powered generator when the battery is expended. For short trips, the Volt can operate entirely on electric miles but in emergencies, the car can travel across our service area without the need for recharging.

Looking ahead, PG&E is also partnering with [ALTe](#), a company that is working on a technology to convert used pick-up trucks to extended-range electric vehicles. Last year, the Utility joined the Advisory Board of ALTe.

Adopting the Industry’s First Electrified Bucket Trucks

PG&E owns and operates approximately 600 trouble trucks, which are used to inspect, repair and maintain PG&E’s vast network of transmission and distribution power lines. PG&E also owns a fleet of larger material handler trucks used to lift large pieces of equipment at the job site.

[\(Watch a video about how PG&E’s partnership with Altec is fostering economic vitality.\)](#)

PG&E owns and operates approximately 600 trouble trucks, which are used to inspect, repair and maintain PG&E’s vast network of transmission and distribution power lines. PG&E also owns a fleet of larger material handler trucks used to lift large pieces of equipment at the job site.

PG&E estimated that up to 30 percent of the fuel used by these trucks was consumed while idling or using the vehicle’s hydraulic lift to operate the boom at a job site. To address this challenge, PG&E and Altec Industries, our manufacturing partner, [developed a first-of-its-kind plug-in battery-powered system](#), called the Electric Worksite Idle Management System (eWIMS). The battery operates the auxiliary systems of these trucks—lights, hydraulic lifts, heating and air conditioning and tools—while at the job site, avoiding the need to idle the vehicle’s engine.

Less idling reduces fuel consumption, saves money, prevents air emissions and provides a safer work environment by reducing noise. In 2011, we brought our fleet of eWIMS-equipped trouble trucks to 220, and we extended the technology to about 25 material handlers. This fleet of eWIMS-equipped vehicles is the largest in the nation.

Flexibility and Mobility During Emergencies

In support of a PG&E-wide focus on safety, in 2011, PG&E deployed four **mobile command vehicles** that can be used to respond to emergencies and protect public and employee safety. When a gas or electric emergency happens, the van will be on-site, not only providing valuable information to the crews in the field, but also as a presence that customers can see. The vehicles serve as an extension of PG&E's Emergency Operations Centers and incident command facilities.

The self-contained units are strategically located within PG&E's service area, enabling them to respond quickly to any type of utility emergency. The vans are packed with the tools crews need to address emergencies from the field, including a 3,000-watt on-board generator, three workstations, laptops, satellite phones, radios and a controller that allows for other radios (such as police, fire and highway patrol) to connect with PG&E radio frequencies.



More recently, PG&E deployed two additional mobile command centers that are capable of supporting major emergencies for extended periods of time. The vehicles are built on a 40-foot bus chassis and can house a dozen people for days or weeks, if needed, to address any emergency needs. Like their van counterpart, these units are some of the most technologically advanced vehicles in production.

Innovative Fleet Vehicles

As part of our commitment to reduce our operational footprint, we continue to incorporate innovative new vehicles into our fleet. Of the nearly 7,800 on-road vehicles we own, roughly 17 percent were powered by compressed natural gas, electricity or other alternative fuels at the end of 2011.

We are introducing a number of innovative vehicles into our fleet:



Plug-in Hybrid Trouble Truck. PG&E partnered with Altec Industries to develop a battery system to quietly and efficiently power equipment on our bucket trucks while at the job site. It reduces fuel use by up to 30 percent. In 2011, PG&E had 220 of these vehicles in service, with plans to add about 50 more in 2012.



Plug-in Hybrid Material Handler. Using the same technology as the trouble trucks, PG&E can operate the aerial lift on this larger bucket truck without running the engine—providing a quiet, emissions-free job site. PG&E plans to put more than 25 of these vehicles in use in 2012.



Mobile Command Vehicles. In 2011, PG&E rolled out a fleet of four 24-foot Sprinter vehicles as a mobile extension of PG&E's Emergency Operations Center.



Extended Range Electric Pickup Truck. This is the first-ever purpose built extended range electric pickup truck. The truck was developed by PG&E in partnership with VIA Motors Manufacturing and power train engineering company AVL.



Hybrid Mini-Excavator. We are working to develop a hybrid mini-excavator, equipment that is used by our gas operations. Smaller than backhoes, these vehicles are increasingly used by PG&E. We will be testing various advanced hybrid technologies.



Chevrolet Volt. PG&E has more than 25 Volts in our fleet. They are designed to run the first 35 miles on a battery and then another 300 miles on a gas-powered electric generator—giving our employees the flexibility they need.



All-Electric Service Truck. The E-Star is the first all-electric truck in its weight class. It was developed by the Navistar-Moderc Electric Vehicle Alliance with PG&E as the utility launch partner. It is fuel-emissions-free and has a range of up to 100 miles on a battery charge—a perfect fit for travel around our power plants, as well as substation and urban locations like San Francisco.

Servicing Our Fleet

To support the growing electrification of our fleet, PG&E is installing charging infrastructure at our facilities.

In 2011, we expanded our network of charging stations to include more than 80 at 19 locations across our service area.

PG&E also consumes petroleum and bio-diesel to power many of the vehicles in our fleet. The following chart shows PG&E's fuel usage over the past three years.

Transportation Fuel Consumed by Pacific Gas and Electric Company

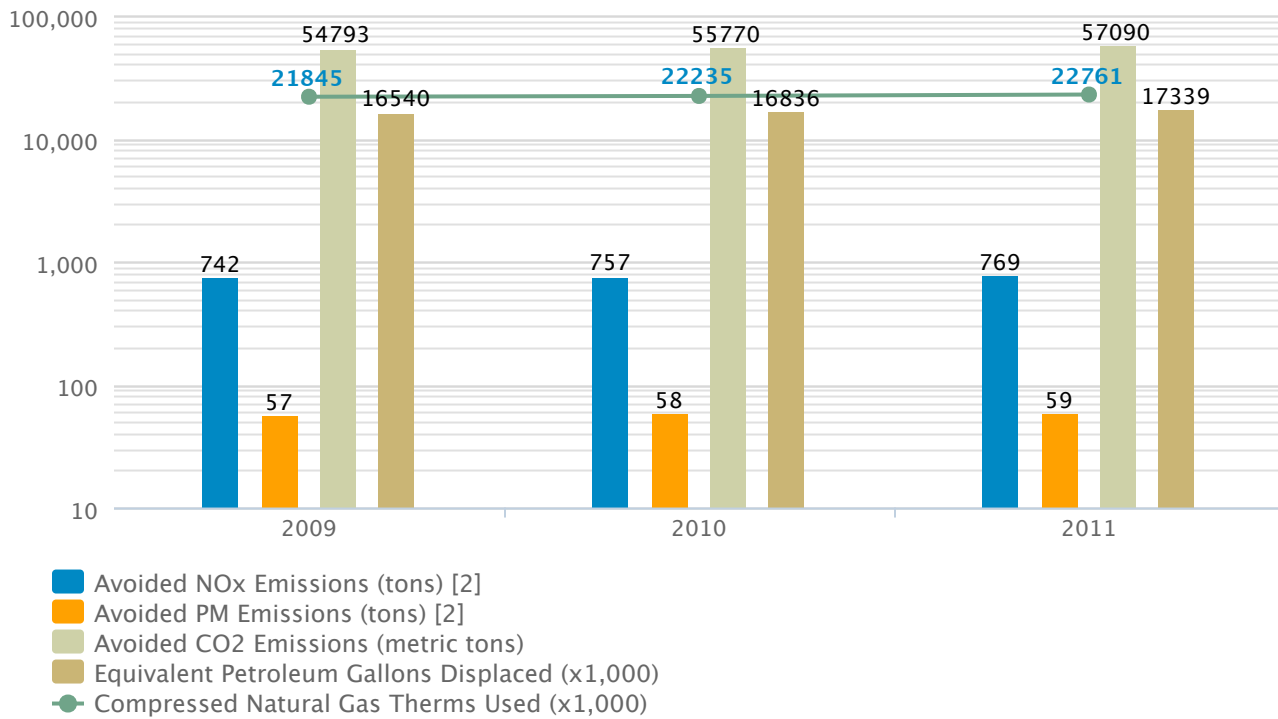
	2009	2010	2011
Petroleum Consumed by PG&E Fleet (gallons)	10,087,653	10,471,788	10,101,009
Bio-Diesel Consumed by PG&E Fleet (gallons)	132,024	268,004	221,118

Supporting Natural Gas Vehicles

PG&E's fleet includes approximately 885 compressed natural gas (CNG) passenger cars, pickups, vans and trucks. We also maintain a network of 32 CNG facilities and one liquefied natural gas (LNG) station, 25 of which are open to customers. PG&E uses its expertise to help customers take advantage of this relatively low-emitting, domestic alternative fuel in their own fleets.

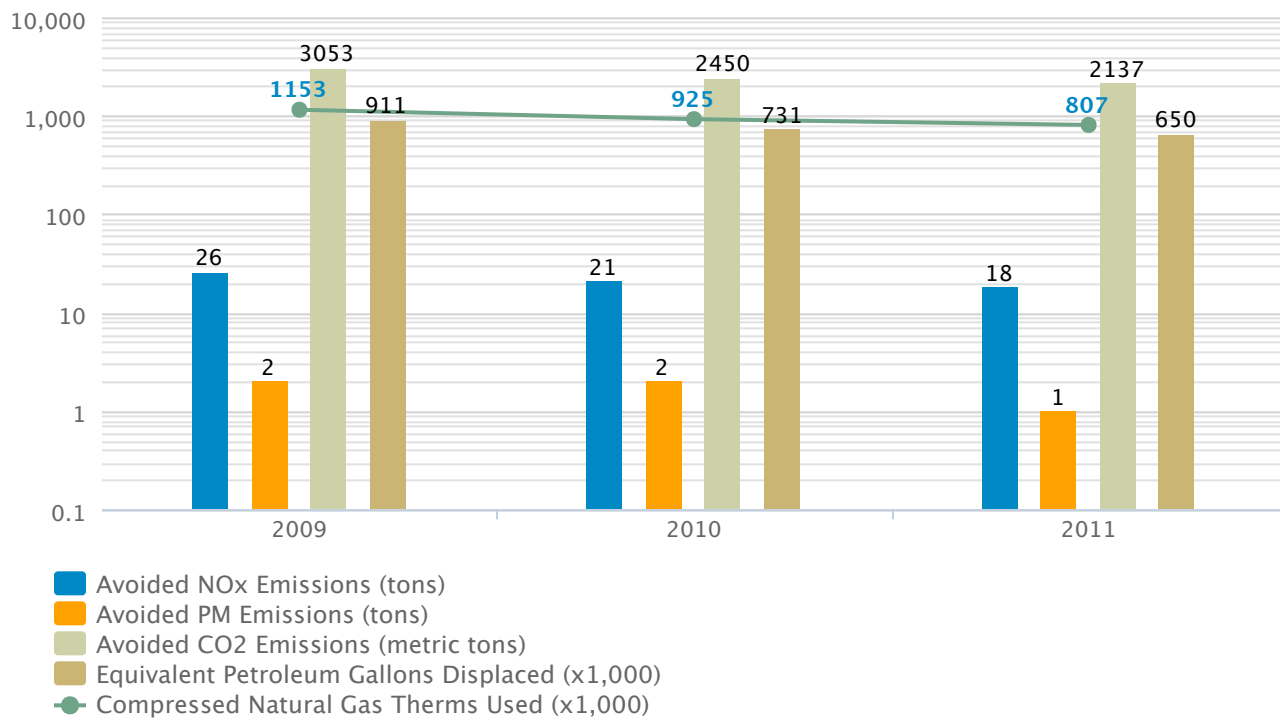
The combined use of natural gas in PG&E's vehicle fleet, along with the fleets of customers, avoided the use of nearly 18 million gallons of petroleum last year, which equals the avoidance of approximately 790 tons of NO_x, 60 tons of particulate matter and 59,230 metric tons of CO₂ on a "well-to-wheel" basis (see the footnote below for an explanation of this term).

Clean Air Transportation (Customer Fleets) [1]



¹ These figures represent a full “well-to-wheel” analysis, which takes into account energy use and emissions at every stage of the process, from the moment the fuel is produced at the well to the moment the wheels are moved. Estimates compare the avoided emissions from PG&E’s CNG vehicles to petroleum usage based on the methodology outlined in Full Fuel Cycle Assessment (CEC-600-2007-003, June 2007), which uses the Argonne National Laboratory’s GREET emission model modified to California inputs.

Clean Air Transportation (PG&E's Fleet) [1]



¹ These figures represent a full “well-to-wheel” analysis, which takes into account energy use and emissions at every stage of the process, from the moment the fuel is produced at the well to the moment the wheels are moved. Estimates compare the avoided emissions from PG&E’s CNG vehicles to petroleum usage based on the methodology outlined in Full Fuel Cycle Assessment (CEC-600-2007-003, June 2007), which uses the Argonne National Laboratory’s GREET emission model modified to California inputs.

Buildings and Facilities

With an ongoing focus on reducing energy, water and waste, PG&E continues to drive environmental improvements at its offices and service yards. By doing so, we are reducing the environmental footprint of our facilities, while providing an enhanced workplace for our employees.

In 2011, PG&E made continued progress toward achieving its five-year targets for reducing energy, water and waste in office facilities and service yards. A growing network of employee volunteers has been critical to our progress—engaging and training fellow employees to reduce their environmental footprint at work.

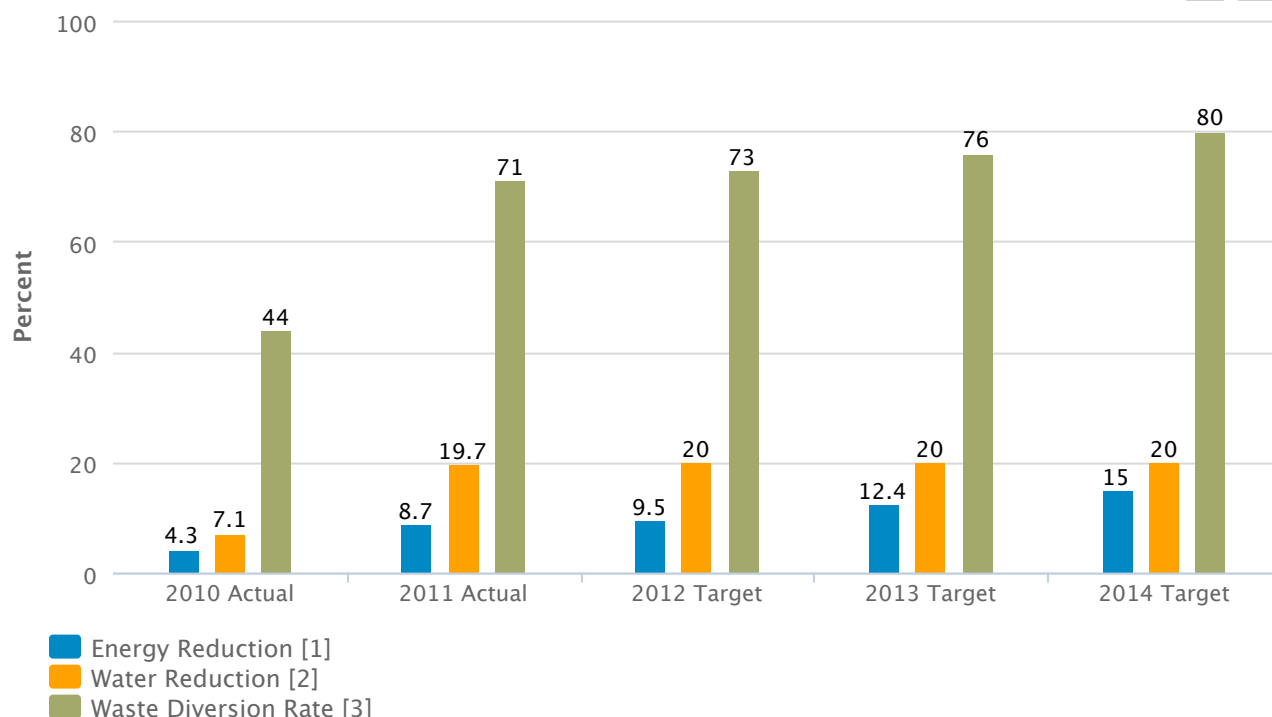


Employees at PG&E's Smart Grid Test Center in San Ramon.

Energy, Water and Waste Reduction

To meet our five-year targets, we are executing a multi-faceted strategy to invest in key facility improvements, engage employees and incorporate sustainability principles into all aspects of the management of our real estate.

Progress Toward PG&E's 5-Year Energy, Water and Waste Reduction Goals



¹ The energy reduction goal is measured in million BTUs (MMBTUs) and included 156 sites in 2010 and 168 sites in 2011 and 2012. We continue to look for opportunities to expand to additional sites.

² The water reduction goal is measured in gallons and included 91 sites in 2010, 125 sites in 2011 and 135 sites in 2012. We continue to look for opportunities to expand to additional sites.

³ The waste diversion rate measures the diversion rate in the final quarter of each year. It included administrative waste for 48 office facilities and service yard sites in 2010 and 2011. In 2012, we expanded the scope to include all non-hazardous municipal waste; we will expand the scope further in 2013 and 2014. Additionally, the 2010 figure was updated to reflect the waste diversion rate at 48 sites; the figure in last year's report only reflected six sites.

Our efforts include improving the operational efficiency of our existing buildings; ensuring that equipment replacements, major remodels and new facilities include high efficiency standards; and identifying additional projects that would result in significant efficiency improvements. We also continue to engage our broader workforce, including partnering with a Grassroots Green Network that brings together employee volunteers to support energy, water and waste reduction awareness and initiatives.

Given PG&E's increased focus on safety and operational issues, however, we have reallocated resources within the business. As a result, we have reduced the level of investment planned for improving the energy efficiency of our facilities. Reflecting this change, we revised our five-year energy efficiency goal from a 25 to 15 percent reduction (compared with the 2009 baseline).

Additionally, we have expanded the scope of our waste reduction activities to encompass a wider range of materials at our office buildings and service yards. We therefore increased our five-year waste diversion goal from 70 to 80 percent.

- We reduced energy use by 4.8 percent—or about 383,150 MMBTUs—at 168 offices and service yards, exceeding our 4.2 percent target. We achieved this by specifying energy efficient designs when replacing

mechanical systems that were past their useful life and installing advanced building automation systems. We replaced some of the lighting in our parking areas and service yards with new LED fixtures with motion sensor and timing controls. We also incorporated energy efficiency into our major remodel projects, which will result in less energy use. In 2012, our goal is to achieve an additional 3 percent reduction at 168 sites.



At our San Ramon Valley Conference Center, we replaced the lights in the parking lot and exterior hallways with LED lighting fixtures with motion sensors and timing controls.



In 2012, we planted native drought resistant landscaping and installed a low volume drip irrigation system at our Sacramento Service Center.

- We reduced water use by 6.0 percent—or 7.8 million gallons—at 125 offices and service yards, exceeding our 5.7 percent target. To achieve these reductions, we reduced landscape water use through enhanced

maintenance and by installing “smart” irrigation controllers at seven additional sites to govern the use of sprinkler systems. We also replaced landscaping at our Sacramento and Redding service centers with a design that includes native drought resistant plants and materials that require no irrigation. In our headquarter complex, we installed automatic faucets and low flow valves on plumbing fixtures. In 2012, our goal is to achieve an additional 2 percent reduction at an expanded set of 135 sites.

- We achieved a nearly 60 percent waste diversion rate, exceeding our 55 percent target. We took a number of steps to achieve this result, including ensuring bins were the right size, upgrading service, engaging employees and adding composting in 15 locations. Our metric in 2011 included the administrative waste produced within the buildings at 48 sites. In 2012, we are expanding the scope to also include all non-hazardous municipal waste generated outside the buildings including pallets, copper and other waste related to operations in the service yards. Our 2012 goal is to achieve a 73 percent waste diversion rate for all non-hazardous municipal waste at 48 sites.

Energy Consumption Statistics

These figures represent electricity and natural gas usage at 168 facilities managed by our Corporate Real Estate department.

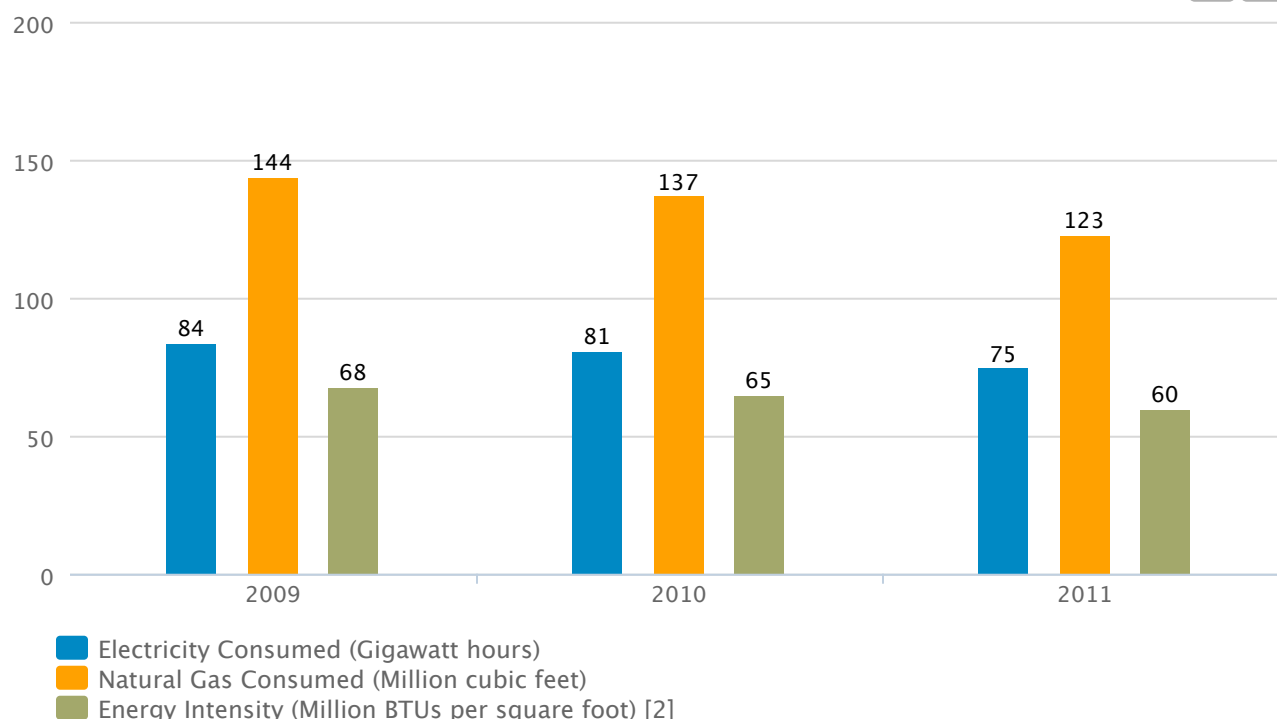
A Friendly Competition to Reduce Waste



Through a floor-against-floor competition, employees in our corporate headquarters rallied around waste reduction last year. The two-month competition—which spanned our headquarters buildings in San Francisco and included approximately 4,500 employees—helped build awareness of proper recycling, composting and waste diversion. It also helped move PG&E closer to our goal of 80 percent waste diversion.

The competition was led by a group of employee volunteers known as Green Ambassadors, who also advised and encouraged employees along the way. The group plans to make the contest an annual event—and to expand the idea to other sites around PG&E.

Energy Consumed by Pacific Gas and Electric Company [1]



¹ The data reflects the 12 month period from December to November and is normalized for weather. Additionally, the 2009 and 2010 data were updated from the previous report, which only reflected energy use at 156 sites.

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 2011, we made continued progress toward developing our “water footprint.”

Please see the [Water Conservation and Management](#) section for statistics on PG&E’s water usage.

Waste Generation Statistics

PG&E strives to minimize use of and recycle non-hazardous waste, such as glass, paper and certain metals. These figures represent the total waste diverted from the landfill at 48 sites managed by our Corporate Real Estate department.

Waste Diversion at Corporate Real Estate Facilities¹

	2011
Total Waste Generated (tons)	6,702
Total Waste Diverted (tons)	3,521
Waste Diversion Rate	60%

¹ The tonnage data reflects the administrative waste at 48 sites for the 12 months from October 2010 to September 2011. The diversion rate reflects the final quarter as measured one quarter in arrears (July to September 2011).

Other examples of waste reduction efforts in 2011 include the following:

- We recycled more than 23 million pounds of scrap iron, aluminum and copper from conductors, meters and miscellaneous material. We also recycled more than 7 million pounds of recovered meters, 12 million pounds of transformers and 115,000 pounds of plastic, including pipe and hard hats.
- We recycled or reused nearly 160 tons of e-waste, including consumer electronic devices, CPUs, monitors, servers, printers, and other equipment.
- Nearly 110,000 pounds of steel, copper and lead was recycled in 2011 from PG&E's Humboldt Bay Power Plant and Diablo Canyon Power Plant.

Recycling Compact Fluorescent Lightbulbs

While [compact fluorescent lightbulbs](#), or CFLs, can save considerable energy and money compared to incandescent bulbs, they also contain small amounts of mercury, which can be released into the environment if the bulbs are disposed in the trash. That's why used CFLs must be managed through special recycling programs.

In 2011, PG&E's internal Grassroots Green Network began hosting monthly CFL recycling drives for employees at our corporate headquarters, raising awareness about the proper management of CFLs and ensuring that they are disposed of properly.

PG&E also launched a [Fluorescent Lamp Recycling Outreach and Marketing Program](#) in six counties in 2011. The program established retail partnerships for fluorescent bulb drop-off and collection in Humboldt, Sonoma, Napa, Alameda, Santa Clara and Santa Cruz counties. By the end of 2011, the program had collected nearly 60,000 fluorescent bulbs from residents.



PG&E also collaborated with Alameda County [StopWaste.org](#) to develop marketing materials encouraging fluorescent bulb recycling. These [free customizable marketing and outreach templates](#) are available to all local governments.

In the normal course of business, utility operations generate certain hazardous wastes. Waste is also created during the remediation and cleanup of historic legacy sites.

Federal hazardous waste management statutes include the [Resource Conservation and Recovery Act](#) and the [Toxic Substances Control Act](#). California has its own set of 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 but are not regulated as hazardous waste under federal law.

PG&E manages all hazardous waste in accordance with federal and state regulations. Our comprehensive approach includes providing guidance and training to employees to ensure that waste is properly managed from the point of generation to its ultimate disposal or recycling.

Additionally, while PG&E works to reduce the amount of hazardous waste generated, certain projects such as upgrades to our infrastructure or remediation of historical contamination may increase the amount of hazardous waste generated in a given year. In 2011, the generation of federal- and state-regulated hazardous wastes increased due to an increase in remediation activity, primarily at PG&E's former Hunters Point Power Plant site.

The following table provides statistics on PG&E's waste generation.

Hazardous and Other Waste

	2009	2010	2011
Total Hazardous Waste (tons)	23,412	33,449	114,999
RCRA ¹ Hazardous Waste	276	1,360	4,286
TSCA ² Hazardous Waste	623	1,863	1,041
California Regulated Hazardous Waste	22,513	30,226	109,672
Total Hazardous Waste (tons)	23,412	33,449	114,999
Disposed	22,446	32,309	110,022
Recycled	966	1,140	4,977
TSCA Hazardous Waste	34	77	432
California Regulated Hazardous Waste	932	1,063	4,545
% Recycled	4.1%	3.4%	4.3%
Federal Regulated Hazardous Waste (RCRA) (tons)			
Total	276	1,360	4,286
Federal Regulated Hazardous Waste (TSCA)—PCB Waste ≥50 ppm PCB (tons)			
Total	623	1,863	1,041
Incineration	239	306	230
Landfill	350	1,479	379
Recycled	34	77	432
% Recycled	5.5%	4.2%	41.5%
California Regulated Hazardous Waste (Non-RCRA)³			
Total	22,513	30,226	109,672
Disposed	21,581	29,163	105,127
Recycled	932	1,063	4,545
% Recycled	4.1%	3.5%	4.1%
Universal Waste (tons)			

	2009	2010	2011
Total	149	164	159
Recycled	149	164	159
% Recycled	100%	100%	100%
Low-Level Radioactive Waste			
Diablo Canyon Power Plant			
Disposed (cubic feet)	793	367	660
Humboldt Bay Power Plant			
Disposed (cubic feet)	8,905	52,009	130,602
Radioactively Cleared Waste			
Diablo Canyon Power Plant			
Disposed (pounds)	N/A	N/A	113,767
Humboldt Bay Power Plant			
Disposed (pounds)	N/A	N/A	N/A
Recycled Materials from Power Plants			
Diablo Canyon Power Plant			
Steel Recycled (pounds)	138,014	115,845	30,300
Copper Recycled (pounds)	61,773	9,300	6,250
Lead Recycled (pounds)	N/A	N/A	15,500
Humboldt Bay Power Plant			
Steel Recycled (pounds)	453,026	743,564	54,856
Copper Recycled (pounds)	110,229	1,475	N/A
Lead Recycled (pounds)	N/A	N/A	N/A

¹ Refers to the Resource Conservation and Recovery Act (RCRA)

² Refers to the Toxic Substances Control Act (TSCA).

³ These figures include PCB Waste <50 ppm PCB.

Investing in Green Buildings

In 2011, we increased the number of projects involved in LEED™ certification to 13 as part of our ongoing efforts to certify new buildings and large remodel projects. As shown below, this includes a range of facilities throughout our service area.

Facility Name	Location	Scope	LEED™ level	Status
245 Market Street	San Francisco	Existing building	LEED-EB Gold	Received April 2007

Facility Name	Location	Scope	LEED™ level	Status
Stockton Customer Service Office	Stockton	Major remodel —leased building	LEED-CI Silver	Received March 2010
Gateway Generating Station —Administration Building	Antioch	New building	LEED-NC Certified	Received March 2010
San Ramon Office Building	San Ramon	Major remodel —leased building	LEED-CI Certified	Received March 2010
Grid Control Center	Vacaville	New building	LEED-NC Silver	Received April 2010
77 Beale, 25th Floor	San Francisco	Major remodel	LEED-CI Gold	Received June 2011
Santa Rosa Service Center—Front Building	Santa Rosa	Major remodel	LEED-NC Certified	Received September 2011
Bakersfield Service Center Operations Building	Bakersfield	Major remodel	LEED-NC Certified	Received January 2012
Stockton Service Center Operations Building 2	Stockton	Major remodel	LEED-NC Silver	Received January 2012
Stockton Service Center Operations Building 1	Stockton	Major remodel	LEED-NC Silver	Received April 2012
Santa Rosa Service Center—Back Building	Santa Rosa	Major remodel	LEED-NC Certified	Received May 2012
Colusa Generating Station —Administration Building	Colusa	New building	LEED-Certified (forecasted)	Expected in 2012
San Francisco Service Center Garage	San Francisco	Major remodel	LEED-NC Gold (forecasted)	Expected in 2012

All of the projects included:

- Recycling 60 to 75 percent of the construction waste.
- Using low-flow and waterless plumbing fixtures to reduce potable water use by up to 40 percent.
- Reducing water use through low or no irrigation for landscaping.
- Deploying energy efficient lighting and mechanical systems and controls.



Photo of remodeled Stockton Service center. PG&E received LEED-NC certification for major remodels at three service centers—Stockton, Bakersfield and Santa Rosa—involving five operations buildings.

- Offering alternative fueling stations and preferred parking for alternative fuel vehicles.

In 2011, PG&E continued to purchase [Electronic Product Environmental Assessment Tool \(EPEAT\)](#) Gold- or Silver-level laptops, desktop computers and monitors—products that have demonstrated reduced environmental impacts. At the end of 2011, more than 98 percent of our standard personal computer items were Gold or Silver EPEAT-compliant.

Greening Our Supply Chain

Given the size and scope of our supply chain, there are many opportunities to minimize the environmental impact of the products and services we purchase. PG&E is working collaboratively with suppliers, academia and other utilities to pursue this opportunity.

We are taking a systematic, long-term approach to reduce the environmental impact of our supply chain, enabling PG&E to better serve our customers and take important steps toward our goal of environmental leadership.



Strengthening Our Business Practices and Systems

One important area of focus is maintaining strong internal processes and systems to manage the performance of our top 100 suppliers. These companies include the most strategic suppliers for our business, including those with whom we spend significant dollars and that are critical to our operations.

Our supplier performance management program provides a structured, integrated process to jointly develop rigorous metrics and key performance indicators, review performance and develop goals for continuous improvement. We conduct recurrent performance evaluations with each top tier supplier using a scorecard of key performance indicators such as safety, product quality and operations, supplier diversity and environmental performance.

In 2011, we embarked on an initiative to update the set of environmental performance metrics included in the scorecards. Leveraging benchmarking research across various industries, we developed new environmental performance standards to promote greater transparency, rigor and accountability. The new standards clearly detail our priorities, provide clarity in the supplier evaluation process and allow suppliers to improve their score throughout the year.

PG&E rolled out the new supplier environmental performance standards in 2012 and now expects all top tier suppliers to:

- Implement an environmental management system that tracks the following environmental impacts: greenhouse gas emissions (Scope 1 and 2), energy, water, waste and compliance with environmental requirements
- Set voluntary reduction goals
- Publicly report their annual performance against goals

Suppliers will report their performance against these new standards in an annual sustainability survey.

These expectations set out fair but rigorous requirements for continuous improvement in environmental management. By setting clear goals and expectations, we will continue to work with our suppliers to identify opportunities to reduce the environmental footprint of their operations.

Working with Suppliers to Pursue Innovation

Our suppliers have achieved environmental improvements across a spectrum of projects. In 2011, MJ Avila earned PG&E's [Green Supplier of the Year Award](#) for their efforts to minimize the environmental impact of their support for PG&E's 250 MW solar photovoltaic installation.

Other suppliers have continued to actively engage on initiatives to reduce their environmental impact. For example, one of PG&E's key distributors, McJunkin Redman, spearheaded a waste reduction initiative at its distribution centers. Last year, by setting up recycling bins for metal bands in their pipe yards, the company recycled more than 100,000 pounds of metal waste. McJunkin also eliminated styrofoam peanuts from their packaging materials, saving more than \$40,000.

Another company, Southwire, partnered with PG&E to expand the use of reusable plastic reels or reel-less packaging, for transporting electric wire and cable. By doing so, Southwire reduced the use and ultimate disposal of wooden reels.

Partnering with Industry Peers

PG&E continues to be an active member of the [Electric Utility Industry Sustainable Supply Chain Alliance](#), a consortium we co-founded in 2008 as a way to work collaboratively with other utilities and organizations on greening our supply chain.



The Alliance established a supply chain operations greenhouse gas emission and energy consumption reduction goal of 10 percent by 2015 using a 2008 baseline of nearly 3 million MMBTUs. The Alliance also committed to having a majority of member suppliers establish a voluntary greenhouse gas emission reduction goal by the end of 2012. PG&E is actively involved in the Alliance's working teams to educate suppliers on the programs available to assist them in establishing greenhouse gas reduction goals.

Additionally, the Utility's Senior Vice President of Safety and Shared Services served as Chair of the Alliance in 2011, leading the development of a strategic and operating plan to better focus the Alliance's objectives on developing green standards and driving adoption of those standards by the industry's supply base.

Focusing on Our Carbon Footprint

PG&E embarked on a multi-year initiative in partnership with U.C. Berkeley and Climate Earth, a carbon accounting consultancy in San Francisco, to quantify the full greenhouse gas footprint of all products and

services procured in our supply chain. These represent Scope 3 greenhouse gas emissions.

We performed this study in two phases and completed it in December 2011:

- We completed a scoping study to measure greenhouse gas emissions from three years of procurement data, mapping more than 122,000 products and services to establish emission factors. This initial study yielded greater visibility into the greenhouse gas emissions of our supply chain and identified areas with the highest concentrations of emissions (excluding contracts for power generation).
- We then selected a short-list of five suppliers to complete in-depth case studies to identify detailed opportunities to reduce emissions. Recommendations from these case studies have led to greater collaboration with our key suppliers.

Our Historic Impacts

As part of PG&E's environmental commitment, we have had a robust program of environmental remediation for more than 20 years with the goal of cleaning up contamination associated with historic PG&E operations and the operations of predecessor companies dating as far back as the mid- to late-1800s. In 2011, PG&E continued its efforts to fully remediate these sites by addressing more than 150 environmental remediation projects, including divested power plants, PG&E operating facilities, former manufactured gas plants and gas compressor stations.



PG&E's Natural Gas Compressor Stations

PG&E's natural gas system includes more than 40,000 miles of distribution pipelines and approximately 6,000 miles of transmission pipelines, working together to provide service to approximately 4.3 million customers from Bakersfield to the Oregon border. Essential to the system are eight gas compressor stations, which receive, store and move natural gas through PG&E's pipelines. Under the direction of state and federal regulatory agencies and with input from numerous stakeholders, PG&E is working to investigate, clean up and restore the environment at both the Hinkley and Topock compressor station facilities.

Hinkley Compressor Station

PG&E's [Hinkley Compressor Station](#) is located in San Bernardino County, southeast of the city of Barstow. Consistent with industry practice at the time, hexavalent chromium was used at Hinkley in the cooling towers in the 1950s and 1960s to prevent corrosion. From 1952 to 1964, cooling tower wastewater containing hexavalent chromium was discharged into unlined ponds, where it infiltrated into the underlying groundwater. PG&E is working cooperatively at the direction of the California Regional Water Quality Control Board—Lahontan Region (Water Board) to assess the extent of contamination and clean up the groundwater.

In its 2010 Feasibility Study submittals, PG&E recommended that the final remedy consist of two distinct approaches, each based on the geography of the area and extent of the hexavalent chromium plume. In the northern half of the plume, where chromium concentrations are within the California drinking water standard, and where outside hydraulic influences create the most potential for plume boundary expansion, PG&E proposes to use groundwater extraction and agricultural treatment. This technology is particularly well suited for this application, in that it allows extraction at rates and locations to optimize control and reduction of the

plume boundaries while providing a sustainable and beneficial way of treating the extracted water by using it to grow crops such as alfalfa.

For the more concentrated southern half of the plume, PG&E proposes continuation and expansion of our existing full-scale in-situ (in place) treatment systems, where we inject food grade materials into the groundwater to create chemical conditions that remove hexavalent chromium from the groundwater, converting it to a naturally occurring form of the metal. During 2011, we began construction on a large-scale expansion of the main central area in-situ system, expanding our ability to create zones where chromium in groundwater is treated and removed.

In 2011, PG&E also greatly expanded its rate of groundwater extraction and agricultural treatment in the northern half of the plume, well above the rate that had existed in previous years. At the Hinkley site, PG&E uses “pivots” to deliver drip irrigation to our agricultural treatment areas. These pivots consist of segments of pipe mounted on wheels that move in a circular pattern from a central axis. In 2011, two new agricultural treatment areas fed by these pivots were brought online, and two others operated for the entire calendar year for the first time. To supply the water to these pivots, targeted extraction wells were constructed and brought online. This higher rate of pumping and targeted extraction, together with other ongoing measures such as injecting a barrier of fresh water outside the plume, is designed to improve the effectiveness of plume containment and remediation.

In May 2011, PG&E committed publicly to doing a better job working with and listening to the Hinkley community. Since then, the PG&E has been actively engaging the local community in new ways. For example, PG&E helped to form and has been actively working with a [Community Advisory Committee \(CAC\)](#) made up of volunteer residents and community leaders. Since the CAC’s first meeting in June of 2011, they have worked cooperatively with PG&E and the Lahontan Water Board to understand the community’s top priorities, which include a focus on the Hinkley School, clean water for indoor domestic use, independent expert assistance to help the community understand the complex technical details of the cleanup process, property values and community investment.



Stephanie Isaacson (right), Director of Stakeholder Engagement with the Utility, signs an agreement with Hinkley Community Advisory Committee Co-Chair Julie Clemmer and Vice-Chair Jon Quass to provide funding for independent third-party technical support to the community.

PG&E was pleased to enter into an agreement with the CAC to provide funding to form an Independent Review Panel (IRP) of qualified experts to assist the CAC and the community in understanding the complex technical issues involved in this project.

In addition, we continued our partnership with the Barstow Unified School District and provided funding for several important projects at the Hinkley School. We also partnered with the Community Action Partnership of San Bernardino County to provide holiday meals for community members. In collaboration with the San Bernardino County Workforce Development Department and other community and business partners, PG&E is also working toward a workforce training and development initiative for Hinkley residents. The Utility maintains a local office in Hinkley to assist residents with their needs.

In 2012, PG&E is working towards implementing a voluntary program to provide whole house replacement water to eligible residents. The program consists of either a filtration system or a new, deeper well, both provided at PG&E's expense. For property owners who do not prefer these options, PG&E may offer to purchase their property at fair market value.

Topock Compressor Station

PG&E's [Topock Compressor Station](#) is located in San Bernardino County about a half mile from the Colorado River. Consistent with industry practice at the time, hexavalent chromium was used at Topock in the cooling towers in the 1950s and 1960s to prevent corrosion. From 1951 to 1964, cooling tower wastewater containing hexavalent chromium was discharged into a nearby dry wash, or ravine, where it infiltrated into the underlying groundwater aquifer. PG&E is working cooperatively with state and federal regulators and other interested parties to assess the extent of contamination and clean up the groundwater. Ongoing monitoring programs continue to show no presence of hexavalent chromium in the Colorado River, a source of drinking water.

In early 2004, in response to detections of chromium near the Colorado River, state regulators required PG&E to construct and operate a protective "interim measure" to hydraulically control the affected groundwater so it cannot move toward the Colorado River. Initially, this interim measure consisted of wells to extract groundwater near the Colorado River, which was transported off-site for disposal. In July 2005, PG&E expanded the interim measure to include a groundwater treatment plant, which cleans the extracted groundwater so it can be returned to the local groundwater aquifer. Over the past eight years, the interim measures have extracted almost 500 million gallons of contaminated groundwater and removed approximately 7,000 pounds of chromium from the environment.

The final remedy for groundwater cleanup was approved by state and federal regulators in January 2011. The approved remedy consists of in-situ treatment of the hexavalent chromium, a technique that has been proven at a number of other sites and that reduces consumptive water use, energy use and the project's footprint on the desert landscape. Throughout 2011, PG&E worked with agencies and interested parties to develop a design and construction approach for the remedy that is consistent with best engineering practices, Environmental Impact Report (EIR) mitigation measures and applicable regulations.

PG&E also continued to work with agencies and interested parties to address soil contamination within and

around the compressor station. In 2010, PG&E cleaned a ravine disposal site adjacent to the compressor station by removing almost 12,000 cubic yards of debris and contaminated soil. The removed material was transported off-site to a secure disposal facility. Further analysis of less studied portions of the soil and groundwater are being planned.

We also continue to work closely with the local Indian Tribes to ensure that they have the ability to meaningfully participate in the remedy-development process, consistent with PG&E's environmental justice policy. We have entered into written agreements with four local tribes—the Fort Mojave Indian Tribe, the Colorado River Indian Tribes, the Cocopah Indian Tribe and the Hualapai Tribe—that provide for reimbursement of certain costs incurred by the Tribes in connection with the Topock cleanup. In addition, through the Topock Leadership Partnership, PG&E meets periodically with leaders from state and federal agencies, Tribes and other stakeholders to discuss the project and seek input on its future direction. Finally, PG&E continues to work with the Fort Mojave Indian Tribe to settle claims relating to the nature and extent of mitigation required by the final EIR.

Manufactured Gas Plants

We continue to make significant progress addressing former PG&E or PG&E predecessor company-owned [manufactured gas plant \(MGP\)](#) sites. In the mid-1800s to the mid- 1900s, before natural gas was available as an energy source, thousands of MGPs were commonly located in cities and towns 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 sites in PG&E's service area were closed and the properties put to other uses.

Of the 41 MGP sites owned or operated by PG&E in the early- to mid-1900s, all but one are in some phase of the remediation process, investigation, remediation or post remediation, under the regulatory oversight of the Department of Toxic Substances Control (DTSC). In 2011, we made some progress toward initiating the last MGP remediation site. We also made significant progress toward site closure at three sites located in Redding, Monterey and Madera in 2011.

The goal of the MGP program is to remediate all 41 MGP sites and receive regulatory closure on these sites as soon as possible. [Review progress on each of the sites.](#)

Hunters Point Power Plant

In 2011, PG&E completed the necessary below-ground demolition and remediated more than 80 percent of the former site of the Hunters Point Power Plant historically located in southeast San Francisco. PG&E is on track to clean most areas of the site to a residential cleanup standard, providing the most flexibility for future reuse of the property.

Keeping our promise to the San Francisco's Bayview-Hunters Point community, PG&E closed the aging facility in 2006 and completed its subsequent above-ground demolition in 2008. The cleanup began in 2010 and is continuing under close oversight of multiple regulatory agencies, including the DTSC and the Bay Area Air Quality Management District.

With the partnership of a community-based project advisory committee, we are working diligently to keep the

local community updated on activities on site and continue to employ local labor, consistent with our environmental justice policy. The effort to hire companies and workers has resulted in \$11 million in direct economic benefit to individuals and companies in the Bayview-Hunters Point community. It has also helped many local workers obtain training in new positions, leading to long-term employment in the construction industry.

The project is making use of locally owned rail transportation for soil disposal, allowing for both local economic development, fewer truck trips through the community and a reduced environmental footprint. The use of rail rather than truck transportation in 2011 alone avoided roughly 2,790 metric tons of CO₂-equivalent emissions.

Sustainable Remediation

PG&E continues to expand the application of sustainable principles, practices and technologies across active remediation projects. To do so, we have implemented guidance for sustainable remediation that was [prepared and piloted with the DTSC](#). By applying the guidance, we are working to identify, implement and track sustainable practices in a consistent manner throughout the lifecycle of ongoing PG&E remediation projects.

Examples of sustainable best management practices include the use of remediation equipment powered by cleaner and alternative fuels, reducing vehicle usage on projects and employing local workers to benefit local communities and businesses.

In 2011, PG&E applied sustainable practices at more than 60 active remediation project sites, in the process reducing greenhouse gas emissions and waste, while maximizing the recycling of materials and benefitting local economies. For example, we implemented an innovative wind-aided remediation technique to reduce the energy used throughout the lifecycle of a project near Rio Vista, resulting in energy savings of up to 30,000 kWh through 2011. We also recycled nearly 75 percent of the demolition waste at a project at our San Luis Obispo substation. Additionally, our work at an MGP in Santa Rosa added approximately \$2.5 million to the local economy.

Moving forward, we will continue to apply sustainable practices to additional PG&E remediation projects and work collaboratively with the DTSC and other state and local agencies on this emerging area.

Earning Recognition

PG&E is honored to have earned recognition for its commitment to the environment and sustainability.



Clarke Awards: Recognizing Employees for Environmental Leadership

Each year, PG&E presents the Richard A. Clarke Environmental Leadership Awards to honor an individual and a team whose efforts demonstrate exceptional environmental leadership. PG&E also gives a charitable contribution of \$10,000 on behalf of the winners, and \$1,000 on behalf of finalists to an environmental, conservation or environmental justice nonprofit organization of their choice.

The 2011 awards went to an individual and a team of employees.

Gary Freeman: Hydroelectric Climate Change Studies & Adaptation Planning

Gary Freeman was recognized for his leadership in helping PG&E better understand the potential impacts of climate change on our hydroelectric operations. Gary has pioneered sophisticated methodologies to proactively evaluate these impacts and has helped PG&E develop effective adaptation strategies to address them. His work includes an ongoing collaboration with the U.S. Geological Survey and the California Department of Water Resources, as well as engagement with other members of the scientific



Gary Freeman, a Utility hydrologist and a member of PG&E's climate-change science team, helps measure the impact of global warming on specific watersheds.

community. Gary also shares his research and best practices through a range of scientific papers and speaking opportunities.

Colusa Generating Station Emissions Calculator Team

This team was recognized for creating a first-of-its-kind air emissions calculator that helps to protect local air quality and ensures that PG&E maintains full compliance with important environmental laws and regulations. By developing the calculator, the team has helped operators at the Colusa Generating Station to proactively manage air emissions from this high-efficiency power plant. The team has made the calculator available for use at other PG&E facilities that have similar complex air-quality permits.



A team at the Colusa Generating Station—from left, Joe Garza, Steve Royall and Charles Price—devised a way to measure air quality in real time.

2011 Recognition for Environmental Leadership and Sustainability

California Integrated Waste Management Board
2011 Waste Reduction Award Program (WRAP)



Carbon Disclosure Project
Carbon Disclosure Leadership Index



Climate Action Reserve
Climate Action Champion



Corporate Responsibility Magazine
100 Best Corporate Citizens



Dow Jones Sustainability North America Index



Maplecroft Climate Innovation Indexes



National Arbor Day Foundation
Tree Line USA Award



Solar Electric Power Association
Top Ten Utility Solar Rankings



Solar Electric Power Association
Solar Business Achievement Award



U.S. Environmental Protection Agency
Clean Air Excellence Award



U.S. Environmental Protection Agency
ENERGY STAR® Sustained Excellence Award



Wildlife Habitat Council
Rookie Project of the Year
Co-Won Community Partner of the Year



Global Reporting Initiative

PG&E is committed to continuous improvement when it comes to how we report our impacts and sustainable business strategies. The table below shows how this report aligns with the Global Reporting Initiative (GRI) Performance Indicators, including the Electric Utility Sector Supplement, which we use as an important guide and reference point. While we are working toward meeting the GRI reporting protocols, for several indicators below, we currently only partially meet the recommended standard.

Indicator	Description	Report Selection(s)
Strategy and Analysis		
1.1	Statement from the senior decision maker	Video Message from the Chairman and CEO
1.2	Description of key impacts, risks, and opportunities	Integrating Sustainability Into Our Business ; Risk and Compliance Management ; Key Sustainability Indicators (1) (2) (3) (4) (5) (6)
Organizational Profile		
2.1	Name of the organization	Cover
2.2	Primary brands, products, and/or services	Company Overview
2.3	Operational structure of the organization	Company Overview
2.4	Location of organization's headquarters	Company Overview
2.5	Countries in which the company has operations	Company Overview
2.6	Nature of ownership and legal form	Company Overview
2.7	Markets served	Company Overview
2.8	Scale of the reporting organization	Company Overview
2.10	Awards received in the reporting period	Diversity and Inclusion Recognition ; Environmental and Sustainability Recognition ; Community Awards
EU1	Installed capacity (MW)	Company Overview
EU2	Net energy output (GWh)	Company Overview
EU3	Number of residential, industrial, institutional, and commercial customer accounts	Company Overview
EU4	Length of transmission and distribution lines	Company Overview
Report Parameters		
3.1	Reporting period	Cover
3.2	Date of most recent previous report	About the Report
3.3	Reporting cycle	About the Report
3.4	Contact point for questions regarding the report	About the Report
3.5	Process for defining report content	About the Report
3.6	Boundary for the report	About the Report
3.12	Table identifying the location of the Standard Disclosures in the report	GRI Index

Indicator	Description	Report Selection(s)
Governance, Commitments, and Engagement		
4.1	Governance structure of the organization	PG&E Corporation and Pacific Gas and Electric Company Joint Proxy Statement, pg. 6
4.2	Indicate whether the Chair of the highest governance body is an executive officer	PG&E Corporation and Pacific Gas and Electric Company Joint Proxy Statement, pg. 6
4.3	Number of members of the highest governance body that are independent and/or non-executive members	Corporate Governance
4.4	Mechanisms for shareholders and employees to provide recommendations to the highest governance body	PG&E Corporation and Pacific Gas and Electric Company Joint Proxy Statement, pg. 5
4.5	Linkage between compensation and the organization's performance	Integrating Sustainability Into Our Business
4.6	Processes for the highest governance body to ensure conflicts of interest are avoided	PG&E Corporation and Pacific Gas and Electric Company Joint Proxy Statement, pg. 15
4.7	Process for determining the composition, qualifications, and expertise of the members of the highest governance body	PG&E Corporation and Pacific Gas and Electric Company Joint Proxy Statement, pg. 11
4.8	Corporate mission and values, codes of conduct and principles	Integrating Sustainability Into Our Business; Risk and Compliance Management
4.9	Board-level processes for identifying and managing risks and opportunities	Integrating Sustainability Into Our Business; Corporate Governance; Risk and Compliance Management
4.10	Processes for evaluating the highest governance body's own performance	PG&E Corporation and Pacific Gas and Electric Company Joint Proxy Statement, pg. A-2
4.12	Externally developed economic, environmental, and social charters	Engaging Stakeholders
4.14	Stakeholder groups engaged by the organization	Engaging Stakeholders
4.15	Identification and selection of stakeholders	Engaging Stakeholders
4.16	Approaches to stakeholder engagement	Engaging Stakeholders
4.17	Key topics and concerns raised through stakeholder engagement	Engaging Stakeholders
Economic		
EC1	Direct economic value generated and distributed	Company Overview; Community Investments
EC2	Financial implications and other risks and opportunities for the organization's activities due to climate change	Addressing Climate Change
EU6	Management approach to ensure short- and long-term electricity availability and reliability	Our Electric Operations; Planning for California's Clean Energy Future
EU7	Demand-side management programs	Customer Energy Solutions; Customer Energy Efficiency; Demand Response
EU8	Research and development activity and expenditure aimed at providing reliable electricity and promoting sustainable development	Our Electric Operations

Indicator	Description	Report Selection(s)
EU9	Provisions for decommissioning of nuclear power sites	Nuclear Operations
EU10	Planned capacity against projected electricity demand over the long term	Planning for California's Clean Energy Future
Environmental		
EN3	Direct energy consumption by primary energy source	Company Overview ; Planning for California's Clean Energy Future ; Greening Our Fleet
EN4	Indirect energy consumption by primary source	Company Overview ; Planning for California's Clean Energy Future ; Buildings and Facilities
EN5	Energy saved due to conservation and efficiency improvements	Customer Energy Efficiency ; Demand Response ; Buildings and Facilities
EN6	Initiatives to provide energy-efficient or renewable-energy-based products and services, and reductions in energy requirements as a result of these initiatives	Customer Energy Solutions ; Customer Energy Efficiency ; Demand Response ; Solar and Other Distributed Generation ; Renewable Energy ; Planning for California's Clean Energy Future
EN8	Total water withdrawal by source	Water Conservation and Management
EN9	Water sources significantly affected by withdrawal of water	Hydro Operations
EN12	Description of significant impacts of activities, products, and services on biodiversity	Natural Resource Stewardship
EN13	Habitats protected or restored	Natural Resource Stewardship
EN14	Strategies, current actions, and future plans for managing impacts on biodiversity	Natural Resource Stewardship
EN16	Total direct and indirect greenhouse gas emissions by weight	Addressing Climate Change
EN17	Other relevant indirect greenhouse gas emissions by weight	Addressing Climate Change
EN18	Initiatives to reduce greenhouse gas emissions and reductions achieved	Addressing Climate Change
EN20	NO _x , SO _x , and other significant air emissions by type and weight	Conventional Sources ; Greening Our Fleet
EN21	Total water discharge by quality and destination	Water Conservation and Management
EN22	Total weight of waste by type and disposal method	Buildings and Facilities
EN23	Total number and volume of significant spills	Compliance
EN26	Initiatives to mitigate environmental impacts of products and services, and extent of impact mitigation	Hydro Operations ; Renewable Energy ; Natural Resource Stewardship
EN28	Monetary value of significant fines and total number of non-monetary sanctions for non-compliance with environmental laws and regulations	Compliance
EN29	Significant environmental impacts of transporting products and other goods and materials used for the organization's operations, and transporting members	Greening Our Fleet

Indicator	Description	Report Selection(s)
	of the workforce	
Labor Practices and Decent Work		
LA1	Total workforce by employment type, employment contract, and region	Company Overview
LA4	Percentage of employees covered by collective bargaining agreements	Working with Our Unions
LA7	Rates of injury, occupational diseases, lost days, and absenteeism, and number of work-related fatalities by region	Employee Safety
LA11	Programs for skills management and lifelong learning	Career Development and Learning
LA13	Composition of governance bodies and breakdown of employees per category according to gender, age group, minority group membership, and other indicators of diversity	PG&E Corporation and Pacific Gas and Electric Company Joint Proxy Statement, pg 18; Diversity and Inclusion
EU14	Programs and processes to ensure the availability of a skilled workforce	Career Development and Learning
EU15	Percentage of employees eligible to retire in the next 5 years	Building Career Pathways
EU16	Policies and requirements regarding health and safety of employees and employees of contractors and subcontractors	Employee Safety
Society		
SO5	Public policy positions and participation in public policy development and lobbying	Corporate Governance
SO6	Total value of financial and in-kind contributions to political parties, politicians, and related institutions by country	Corporate Governance
SO10	Prevention and mitigation measures implemented in operations with significant potential or actual negative impacts on local communities	Public Safety
EU19	Stakeholder participation in the decision making process related to energy planning and infrastructure development	Engaging Stakeholders
EU21	Contingency planning measures, disaster/emergency management plan and training programs, and recovery/restoration plans	Employee Safety; Public Safety
EU23	Programs, including those in partnership with government, to improve or maintain access to electricity and customer support services	Helping Customers in Need
EU24	Practices to address language-, cultural-, low-literacy- and disability-related barriers to accessing and safely using electricity and customer support services	Public Safety; Helping Customers in Need
Product Responsibility		

Indicator	Description	Report Selection(s)
EU28	Power outage frequency	Our Electric Operations
EU29	Average power outage duration	Our Electric Operations

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