Safety

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

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

Key Sustainability Indicators

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

**20.33 minutes**

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

**97.1%**
Highlights

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

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

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

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

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

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

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

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

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

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

Reducing methane emissions

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

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

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

Safety Culture Roadmap

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

Safety Governance

The PG&E Corporation and Pacific Gas and Electric Company Boards of Directors are generally responsible for oversight of safety at PG&E. The Nuclear, Operations, and Safety (NOS) Committee of the PG&E Corporation Board is specifically
responsible for overseeing safety policies and issues related to the Utility’s operations and facilities, as well as goals, programs, policies and practices with respect to promoting a strong safety culture.

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

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

- **Safety and Risk Committee:** guides our safety strategy and assures continuous improvement in safety performance. The Committee meets regularly to review performance and address gaps and barriers. In addition to the PG&E Corporation Chairman and CEO, members include Pacific Gas and Electric Company’s presidents, additional senior PG&E officers and leaders from the IBEW and ESC labor unions.

- **Executive Safety Committee:** ensures that strategies and programs are reviewed prior to discussion at the Safety and Risk Committee and also provides a forum for learning across lines of business and continuous improvement associated with the approved strategies.

- **Line of Business Safety Councils:** executes plans to reduce and eliminate exposure to possible safety incidents. The Councils are composed of management, union and grassroots team members. These efforts are supported by grassroots safety teams comprised of frontline employees who share ideas and partner to come up with effective solutions to reinforce a safety-first culture.

- **Enterprise Safety Working Team:** reviews enterprise-wide plans to reduce and eliminate exposure to incidents and improve our culture. Comprised of representatives from the lines of business and safety organization, this team reviews and provides recommendations for initiatives to ensure we are providing proactive and consistent enterprise solutions to safety challenges.

Key safety leadership development and employee engagement initiatives include:

- **Safety leadership development for upper management (officers and directors):** an annual one-day workshop that creates alignment around safety leadership language, principles and practices.

- **Safety leadership development for managers and supervisors:** a series of six workshops over 18 months that teach practical skills related to safety leadership, injury prevention and protecting the public, employees and contractors. It also includes one-on-one in-field coaching and a 360-degree assessment that collects feedback and increases self-awareness. In 2016, we are expanding the workshops to union-represented crew leaders.

- **Integration across leadership development:** incorporating safety leadership into our suite of Leading Forward leadership development offerings.

- **Seeking employee feedback:** increasing the number of safety-related items in our employee engagement survey to better represent employees’ sentiment and collect insights around building and maintaining a safety culture.

- **Further integration within our hiring process:** reviewing our current use of pre-hire tests that assess candidates’ predisposition to follow safe practices and determining other jobs where this test may be used.

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

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

Our Approach

Embedding Safety in Our Operations

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

- **Gas Operations**: We are working across the board to strengthen our gas infrastructure and enhance our operations. Among other highlights, we became one of the first companies in the United States to meet the rigor of a new industry gold standard for pipeline safety and safety culture; completed another significant safety recommendation issued by the National Transportation Safety Board following the San Bruno accident by finishing the installation of 235 automatic and remote controlled valves; and broke ground on a new Gas Operations Technical Training Center.

- **Electric Operations**: PG&E’s focus remains on reducing the incidences of downed wires in our service area, integrating the latest in technology to monitor our electric lines and improve our ability to respond more quickly to outages, and proactively managing vegetation surrounding our electric lines to protect the infrastructure and surrounding communities.

- **Energy Supply**: We remain strongly committed to the highest levels of safety, performance and security at Diablo Canyon. We also continue to inspect and maintain our hydroelectric system according to strict safety guidelines, and to enhance public safety outreach in communities around our facilities.
Emergency Preparedness

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

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

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

2015 Milestones

First Responder Collaboration and Assistance

PG&E prioritizes coordination and communication with police, fire and other officials during emergency situations in an effort to keep the public and first responders safe. Our emergency response plan—which is developed, shared and tested with emergency officials—defines clear lines of responsibility for PG&E and emergency personnel. PG&E also maintains a secured First Responder website where emergency officials can access training materials and gas transmission infrastructure information and maps.

Highlights from last year included:

- **Partnered to prepare for fire season.** PG&E electric operations field supervisors and superintendents met with the National Weather Service, CAL FIRE, California Office of Emergency Services, U.S. Forest Service, Bureau of Land Management and the National Parks Service. During the meeting, we shared our plans and learned of the threats to PG&E’s infrastructure and facilities, allowing staff to better prepare and respond to fire danger in collaboration with outside agencies.

- **Used daily air patrols to help detect wildfires and assist state and local fire agencies with early fire detection and response to stop fires from spreading.** During the four months PG&E operated the flights as part of its drought emergency response, the patrols spotted 146 fires and in 25 instances were the first to report the fire to CAL FIRE or the U.S. Forest Service. Early detection of smoke or fire allowed fire agencies to quickly respond to accurate locations and put out fires before they spread.

- **Hosted nearly 700 training workshops** facilitated by our public safety specialists to better prepare firefighters, police, public works officials and other authorities to respond to emergencies involving electricity and natural gas. We also met with many of the fire departments in our service area with PG&E gas transmission or distribution facilities located in their region.

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

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

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

- **Announced the Better Together Resilient Communities grant program**, a shareholder-funded initiative that will invest $1 million over five years to support local planning efforts to help better prepare for, withstand and recover from extreme events and other risks related to climate change, such as sea level rise, flooding, land subsidence, heat waves, drought and wildfires.

- **Continued our partnership with the American Red Cross**, contributing $1 million to build safer, more disaster resilient communities across Northern and Central California. The donation was used to support the Home Fire Preparedness Campaign, a multi-year home safety program that will help save lives and enhance safety in underserved communities.

- **Awarded wildfire prevention grants to local Fire Safe Safety Councils**. The grants marked the third consecutive year PG&E partnered with local California Fire Safe Councils to fund shovel-ready projects. The money provided in 2015 was used to protect communities from wildfires in at least 18 high fire-risk counties by clearing brush and dead, dying or diseased trees.

Public Safety Awareness

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

- **Emphasized the importance of calling 811 before any excavation project**, with outreach around National Safe-Digging Month, California Arbor Week and National 811 Day. PG&E also urged the U.S. natural gas industry to increase contractor education and outreach about the significant safety risks associated with reckless digging and to step up enforcement of companies that don’t follow the law.

- **Sponsored the 11th-annual California Day of Preparedness**. Hosted by the Governor’s Office of Emergency Services, the event featured demonstrations by the Sacramento Certified Emergency Response Team, a swift water rescue by Sacramento County Sheriff’s Drowning Accident Rescue Team, PG&E gas and electric safety demonstrations, and emergency response vehicles.

- **Supported CAL FIRE broadcast, print and billboard advertising** to make homeowners aware that bark beetles are killing millions of trees in California, which then become fuel for fire, and to educate residents on how to safely take action.

- **Joined forces to host an El Niño preparedness workshop** for Spanish-speaking residents, working in collaboration with the City of Santa Cruz, Santa Cruz Seaside Company, the American Red Cross and local agencies. Additionally, PG&E hosted El Niño preparedness media roundtables in the Bay Area, Sacramento and San Luis Obispo that featured the Red Cross and first-responders and a wires-down safety demonstration.

- **Conducted interactive electric and gas safety demonstrations** using a traveling display that allows instructors to show potential hazards associated with gas and electric facilities to students, youth groups, contractors, emergency personnel and customers. PG&E gas and electric professionals held more than 2,900 demonstrations in communities throughout our service area.

Cybersecurity

As we integrate more Internet-connected technologies into our electric system to create a smarter grid, the importance of cybersecurity continues to increase—for PG&E and our customers. In fact, the U.S. Department of Homeland Security has classified utility assets as a key resource and critical infrastructure for our national and economic security. PG&E is firmly committed to working with other gas and electric providers, other essential industries and government officials to develop and implement state-of-the-art cybersecurity strategies and best practices.

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

Identifying and evaluating cybersecurity risks revolves around understanding business processes and core enabling technologies, while providing ongoing monitoring of our infrastructure and external threat landscape. Once risks are identified and prioritized, we develop mitigation plans to ensure an acceptable level of risk exposure.
Cybersecurity training and awareness continue to be a major focus for all employees and contractors, with all PG&E employees required to take an annual information security and privacy awareness course. Leaders are subject to additional coursework to further integrate cybersecurity awareness into our culture.

Physical Security

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

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

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

Measuring Progress

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

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

Looking Ahead

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

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

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

Our Approach

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

- Setting aggressive health and safety targets to track and evaluate our performance.

- Implementing a Corrective Action Program in a number of our operational lines of business, allowing employees to identify and report potential safety hazards or equipment problems. Each issue is tracked until the appropriate corrective action is completed. The program includes a feedback loop so that employees who submit issues receive information on action taken as a result of their submission. Employees may also submit issues anonymously.

- Continuing to improve our Motor Vehicle Safety Program by adopting a phone-free driving standard so that all employees can maintain their focus on the road.

- Integrating health and wellness into our safety organization to allow for a more comprehensive approach to evaluating health and safety programs, such as our Industrial Athlete Program, that contribute to our employees' ability to work safely.
2015 Milestones

Employee Safety

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

- **Reinforced a “speak up for safety” culture.** We continue to take concrete steps to improve our culture so that every employee is empowered to speak up about safety without peer pressure and approach each task with a safety-first mindset. Safety is emphasized in employee communications, from all-employee messages to safety tailboards that are discussed when field personnel begin their workdays.

- **Rolled out the Corrective Action Program to additional lines of business.** We implemented the program in our Safety and Shared Services organization, giving employees an additional, anonymous option to report potential safety concerns. This followed years of success with the program at our Diablo Canyon Power Plant and a successful implementation in our gas organization, with use among employees continuing to grow.

- **Enhanced our Motor Vehicle Safety Program.** In addition to implementing a phone-free driving standard, we installed vehicle safety technology on about 1,000 vehicles, giving drivers audible alerts after hard breaking, hard acceleration and speeding deemed to be excessive. This helps alert drivers to at-risk behaviors to improve safety behind the wheel.

- **Enhanced focus on potentially serious incidents.** Through analysis of field observations, past incidents and near hits, PG&E has determined the work conditions that carry the greatest potential for serious injury. One module of our Safety Leadership Training teaches leaders how to identify workplace hazards when they perform field observations, reducing the risk of potentially hazardous conditions. PG&E is also incorporating prevention checklists into work processes to reduce potentially high-risk conditions.

- **Continued technical training for field employees.** Together, our gas and electric operations logged more than 38,000 student days through 128 web-based training courses on gas safety tasks and 225 instructor-led courses on electric safety tasks. This was in addition to a strong focus on safety leadership development.

Contractor Safety

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

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

**Certification program for PG&E excavation contractors**

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

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

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

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<tr>
<th>SAFETY RESULTS FOR 2013 THROUGH 2015 (UTILITY)</th>
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<td>2013  2014  2015</td>
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<td>22,541  22,371  23,463</td>
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<tr>
<td>76     86     87</td>
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<td>0.346  0.376  0.372</td>
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<tr>
<td>1. Total Lost Workdays is an internal PG&amp;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).</td>
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<tr>
<td>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.</td>
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<td>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.</td>
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<td>4. Total OSHA Recordables is the number of injuries and illnesses that meet OSHA requirements for recordability—those that (1) are work-related, (2) are new cases and (3) meet one or more OSHA general recording criteria.</td>
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<tr>
<td>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.</td>
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The following table provides motor vehicle safety statistics for 2013 through 2015:

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<tr>
<th>MOTOR VEHICLE SAFETY STATISTICS (UTILITY)</th>
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<td>2013  2014  2015</td>
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<td>54     39     40</td>
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<td>0.381  0.274  0.266</td>
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<tr>
<td>1. Refers to the number of serious preventable motor vehicle incidents that could have been reasonably prevented by the PG&amp;E driver. Measures only those incidents considered to be serious, rather than all incidents that were otherwise preventable.</td>
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<tr>
<td>2. Number of serious preventable motor vehicle incidents that the driver could have reasonably avoided, per 1 million miles driven.</td>
</tr>
</tbody>
</table>

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

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

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

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

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

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

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