



Background

Pacific Gas and Electric Company (PG&E), a subsidiary of [PG&E Corporation](#), is one of the largest combined natural gas and electric utilities in the United States. Based in San Francisco, the company delivers some of the nation's cleanest energy to nearly 16 million people in Northern and Central California. PG&E has made unprecedented changes in recent years to improve our natural gas system and we are dedicated to continue working with stakeholders to identify innovative and responsible solutions to reduce greenhouse gas emissions. PG&E was recognized by the White House in its 2014 Climate Action Plan as one of the few gas utilities nationwide collaborating to address key technical and regulatory factors affecting methane emission reduction opportunities. PG&E continues to advocate for initiatives supporting climate goals, and believes the EPA's Natural Gas Star Methane Challenge will help us pursue these goals.

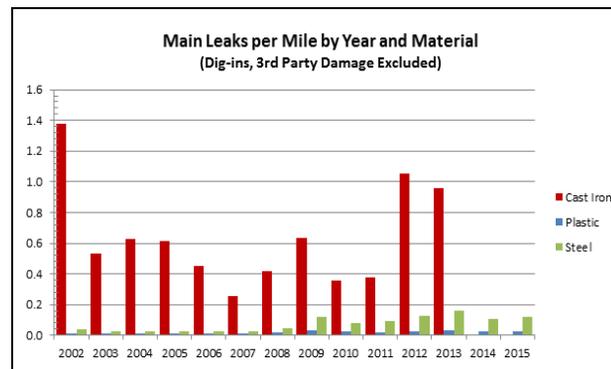
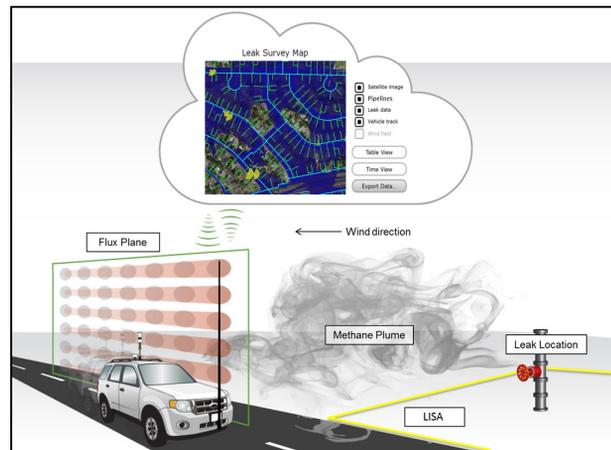
Historical Highlights

Increased Leak Detection—Picarro Surveyor

In 2012, PG&E was the first utility in the country to test and deploy the vehicle-mounted Picarro Surveyor, a leak detection system, which is 1,000 times more sensitive than traditional leak detection equipment. In 2014, PG&E established its Supercrew workstream to help work flow more efficiently across teams focused on performing leak survey and leak repair. This process allows PG&E to detect more leaks, bundle repair activities, and fix leaks faster and more efficiently than ever before. PG&E has been able to survey more of its system, which has led to a 99 percent reduction of minor, non-hazardous leaks on its system since 2010. [Link](#)

Cast Iron Pipeline Replacement

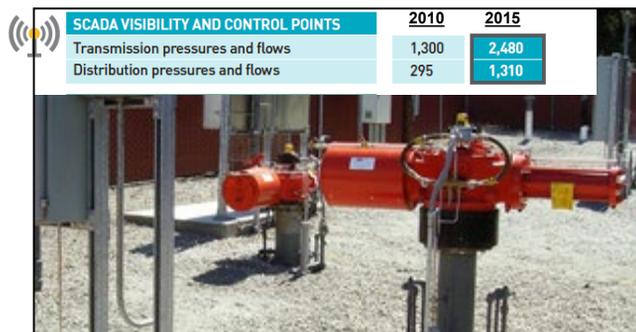
In 1985, PG&E established its pipe replacement program to replace vintage gas distribution pipe. In 2014, PG&E met our self-imposed year-end goal to replace all known cast iron pipeline. Throughout this project, PG&E employees replaced 847 miles of cast iron pipeline—more than enough to stretch from San Francisco to Seattle. PG&E has implemented one of the most comprehensive gas pipeline modernization programs in the nation and has been recognized for its efforts as it earned two prestigious international safety-focused asset management certifications for its gas operations. [Link](#)



Pacific Gas and Electric Historical Fact Sheet

System Visibility

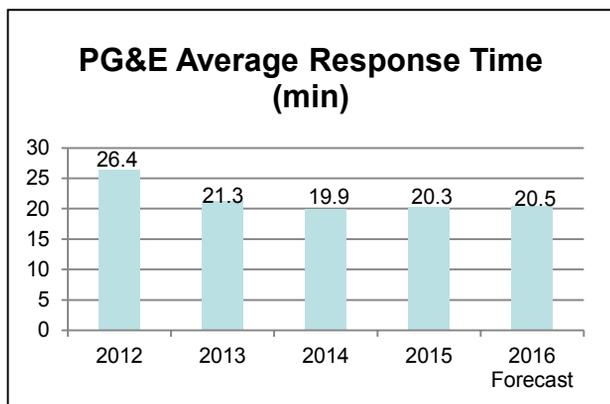
Since 2011, PG&E has automated 217 valves, and approximately 522 miles of gas transmission pipeline miles now have automated isolation capability. This allows PG&E's transmission pipeline to be rapidly isolated through remote control valve technology. Valves can be opened or closed from PG&E's newly designed Gas Control Center. The rapid isolation enhances PG&E's and public officials' emergency response, while reducing damage to property, the public, and methane emissions to the environment. [Link](#)



Faster Response

PG&E is now responding to leaks faster than ever and ranks amongst the top quartile nationally. In 2015, PG&E began treating all gas odor calls as Immediate Response and responding to all such calls in an average of 21 minutes. PG&E's two-phased approach included increasing personnel to respond and treating all odor calls as immediate response, and optimizing the deployment of these crews.

This improved response metric continues to improve public safety by responding to all gas odor calls as quickly as possible. [Link](#)



Research and Development Initiatives

PG&E continues to engage in research and technology that better identifies and quantifies methane emissions and sources. These advancements are improving the way we prevent, find, measure, and fix sources of methane emissions. Examples of this R&D include the deployment of LiDAR laser technology to identify methane emissions from aircraft, aerial deployment of NASA JPL's adapted methane sensor on an unmanned aircraft system, and most recently, installation of stationary methane monitoring equipment that allows for around-the-clock leak monitoring and aids in getting a more accurate estimate of yearly methane emissions.

[Link](#)

