Methane Challenge Workshop

Blowdown Reductions

PG&E®

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Company Background

PG&E GAS TRANSMISSION PIPES

- GAS TRANSMISSION PIPES
- GAS SERVICE TERRITORY

scale 1:5,000,000
one inch represents approx 80 miles

Redding

PG&E Service Territory

San Francisco

Bakersfield
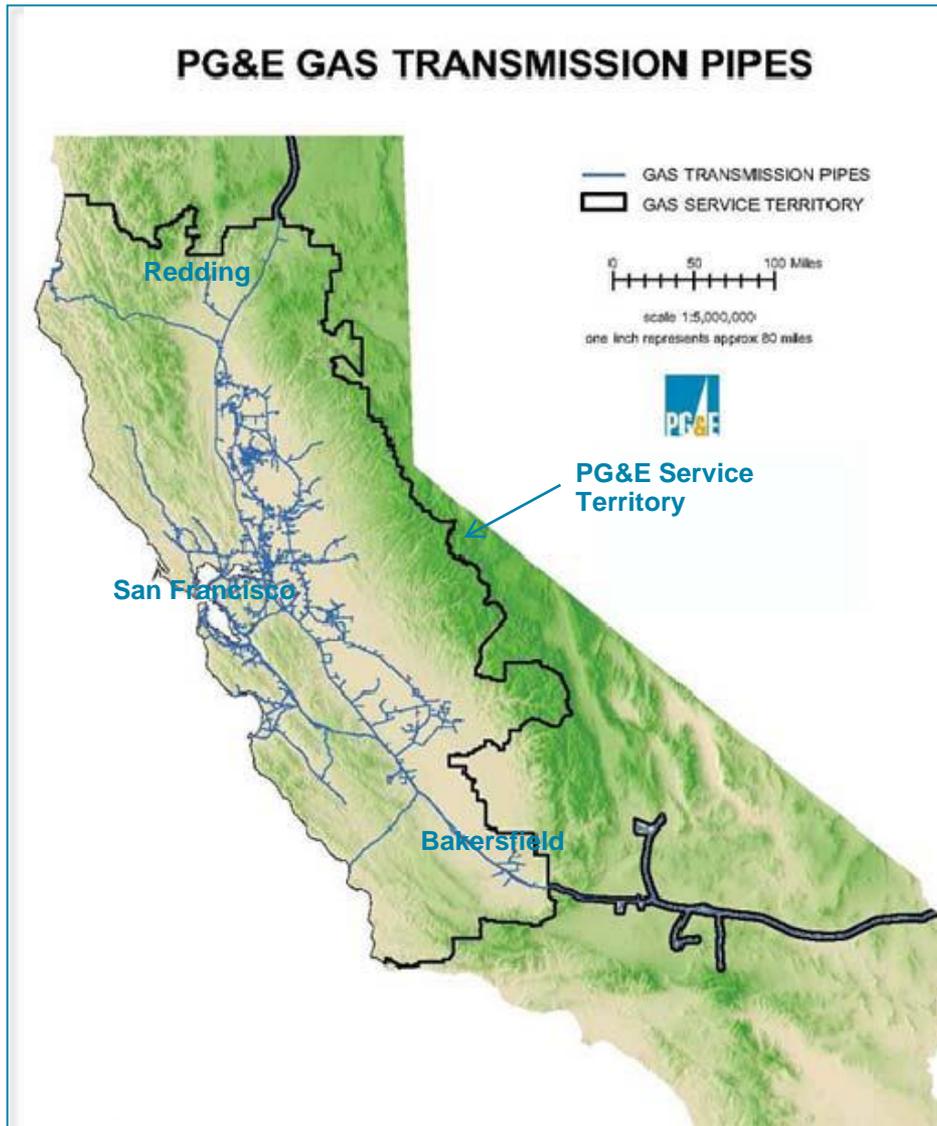
- Incorporated in California in 1905

- One of the largest combined natural gas and electric utilities in the United States

- Serves approximately 15 million people throughout a 70,000-square-mile service area

- ~ 6,600 miles gas transmission pipeline

- ~ 42,000 miles of gas distribution main

- 4.5 million natural gas customer accounts

- Deliver 970 BCF/year

Overview

- PG&E is committed to building the safest, most reliable gas system in the nation.

- PG&E's commitment to addressing climate change is an integral part of our business and we are proud to be an industry leader in reducing methane gas emissions.

- PG&E was recognized by the White House in its 2014 Climate Action Plan as one of the five gas utilities nationwide collaborating to address key technical and regulatory factors affecting methane emission reduction opportunities.

Efforts to Date

- PG&E has been performing blowdown reduction efforts on its backbone system for years

- PG&E has supported EPA's Natural Gas STAR Program since 2008

- We're involved in an R&D project to create technology capable of measuring methane emissions more efficiently and consistently than anything on the market today.

- Safety and reliability work has emission reduction benefits

Early Detection And Prevention

Increased Monitoring

Asset Management

Improved Response

Implementing Blowdown Reduction Strategies

■ Develop guidelines for using technology and emission reduction strategies while maximizing operational efficiencies

➢ Support from leadership

➢ Develop transparent and a repeatable process

➢ Identify ways to bundle work

Next Steps

- Understanding how to measure anticipated emissions

- Identify cost effective ways to use technology (fleet vs contract)

- Continue to focus on R&D for new, and more cost effective methods and technologies to reduce emissions