



What are the Highest Pipeline Risks?

Department of Transportation National Pipeline Safety Forum

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Natural Gas Transmission Pipelines

What is a “transmission pipeline”?

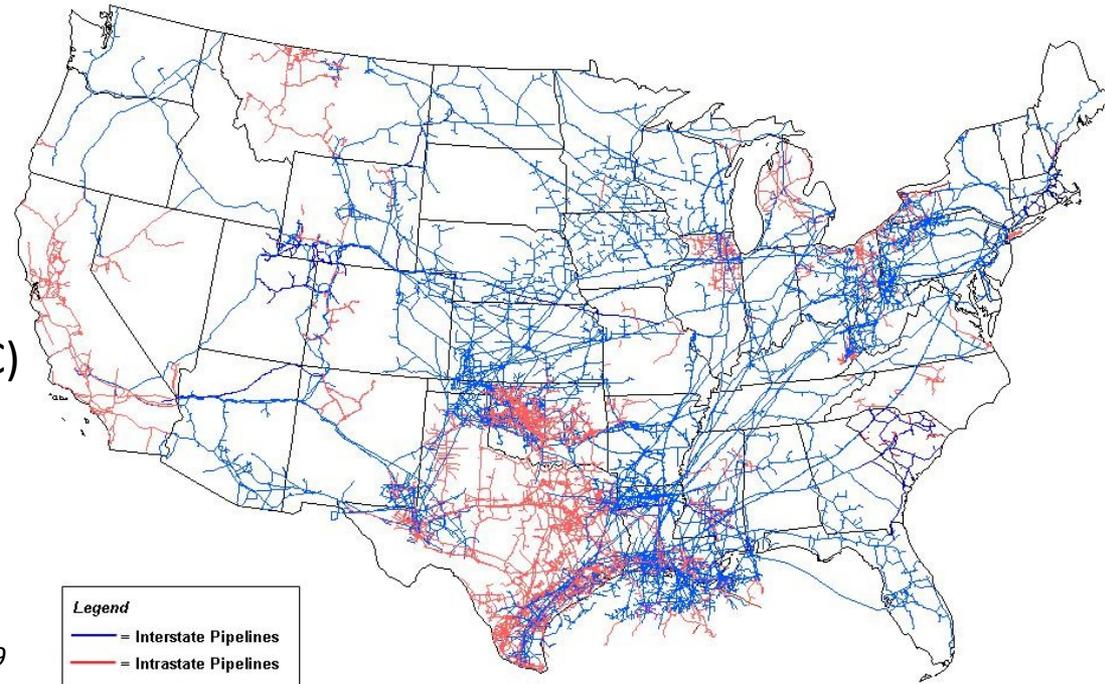
- A high-pressure and generally larger-diameter pipeline that transports gas from the production area to the market area.

How many miles of transmission pipeline are in the U.S.?

- 302,110 miles of natural gas transmission pipeline⁽¹⁾
- 202,703 miles of natural gas pipelines are operated by INGAA members⁽²⁾

Who are the owners of transmission pipeline?

- Interstate pipeline
- Intrastate pipeline
- Local distribution company (LDC)
- Municipalities



(1) 296,441 miles onshore + 5,669 miles offshore; (2) 197,869 miles onshore + 4,834 miles offshore

Transmission Pipeline Leaks are Declining

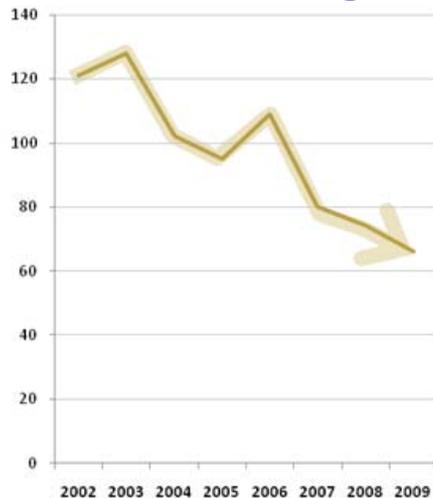


Risks to Pipeline Safety (per ASME B31.8S)

- Excavation / Third Party Damage
- External Corrosion
- Internal Corrosion
- Manufacturing Flaws
- Construction Flaws
- Outside Forces
- Operator Error
- Equipment Failure
- Stress Corrosion Cracking

2002 – 2009: Significant progress made to reduce leading risks

Excavation Damage Leaks



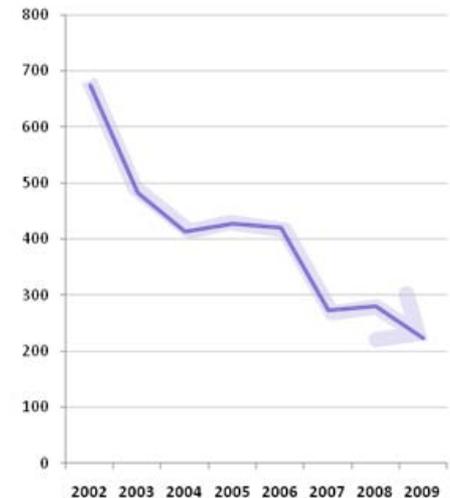
54% reduction

Corrosion Leaks



46% reduction

Material & Weld Leaks



65% reduction

IMCI

Integrity Management Continuous Improvement

1

Our goal is zero incidents *a perfect record of safety and reliability for the national pipeline system.*

We will work toward this goal every day.

2

We are committed to a safety culture as a critical dimension to **continuously improve** our industry's performance.

3

We will be relentless in our pursuit of **improving by learning** from the past and anticipating the future.

4

We are committed to **apply integrity management principles** on a **system-wide** basis.

5

We will engage our stakeholders, the local community to the national level - so they understand and can **participate in reducing risk.**

Board Task Force Key Focus Areas

Driving improvement in key areas – a comprehensive approach to mitigating risks

- Creating Stakeholder Engagement to Achieve Common Goals
- Evolving Risk Management Processes
- Improving Existing Integrity Management Tools
- Ensuring Safety of Older Pipelines
- Accelerating Technology Development & Deployment
- Defining “Responsible Operator” Management Systems
- Improving Emergency Preparedness & Response
- Ensuring Asset Integrity During New Construction



“We share a common goal and together we can ensure the safety of our critical infrastructure”

Supporting Slides

INGAA – Who We Are



- Trade association representing natural gas transmission pipeline operating companies in North America
- 26 member companies, representing approximately 203,000 miles of PHMSA regulated transmission pipeline*
- Leaders in furthering pipeline safety through studies, committees, workshops, electronic media and interaction with PHMSA
- Provide opportunities for developing and sharing industry best practices and proactive in assisting other pipeline industry segments
- Members are regulated for pipeline safety directly by the Pipeline and Hazardous Material Administration (PHMSA) of the U.S. Department of Transportation**
- Members are regulated economically by the Federal Energy Regulatory Commission (FERC)

**PHMSA regulated transmission pipelines operated both onshore and offshore by INGAA members, as reported in the PHMSA 2009 Annual report*

***2011 New INGAA Member Pacific Gas & Electric is regulated by the California Public Utilities Commission*

What Does the Safety Data Mean?

- Serious incidents involving the public have been declining for four decades
 - Leak trends indicate efforts are delivering positive results
- However, significant incidents - while infrequent - are still occurring at an unacceptable level
- Integrity management standards provide a framework for managing pipeline safety threats
 - Studies show that effective mitigation requires a comprehensive approach based on data integration and risk assessment
 - There is no simple solution for ensuring pipeline safety – multiple tools and processes must be employed and tailored to each particular pipeline

Pipeline safety is a shared responsibility – between operators, the government and the public