LAUF & Distribution Pipe Replacement – A National Perspective

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The American Gas Association, founded in 1918, represents more than 200 local energy companies that deliver clean natural gas throughout the United States.

AGA represents 100% of the investor-owned gas utilities in the country.

There are more than 72 million residential, commercial and industrial natural gas customers in the U.S., of which 94 percent — over 68 million customers — receive their gas from AGA members.
1. How to measure emissions – Hint: Not with LAUF.

2. Pipeline safety -- driving infrastructure replacement and lower emissions

3. Key requirement: Utility rate cost recovery to accelerate pipe replacement
• What is Lost and Unaccounted For (LAUF) Gas?
• LAUF is mainly a metering and accounting adjustment.

• LAUF includes small amounts for gas theft and emissions, but there is no correlation between LAUF and emissions.

• EPA has long recognized the limitations of LAUF and rejected idea of using LAUF to measure or estimate methane emissions.
A Better Way to Measure Emissions

Go to representative facilities... And measure flow rates.

![Image of representative facilities](image1.png)

![Image of measuring flow rates](image2.png)
How to measure emissions from buried pipe...

1. Map surface area of a leak using a portable sniffer

2. Use a flexible surface enclosure to capture the leak

3. Measure emissions using a calibrated high-flow sampler
DOT Pipeline Safety Action Plan

- Raises the bar on pipeline safety
- Accelerates rehabilitation, repair and replacement programs for high risk pipelines
- Focuses on cast iron, bare steel, older plastic
- AGA Supports the Action Plan and “Smart Modernization” of infrastructure that is no longer fit for service
Natural Gas Distribution:
Focus on Safety
Side Benefit → Emissions Shrinking

• Emissions from distribution **shrunk 17 percent** since 1990 ...

• even though we added over **300,000 (30 percent more)** miles of distribution mains ...

• to serve **17 million (30 percent)** more customers

• Why? Because we **replaced thousands of miles** of existing cast iron and bare steel pipe with **modern PE plastic pipe**

• Result: EPA estimates distribution systems emitted **0.24%** of produced natural gas in 2013
Emissions Have Declined Even as Pipeline Miles Have Grown

Pipeline Replacement Lowers Emissions

Million Metric Tons CO2-equivalent

- Estimated Potential Emissions from Main Pipe
- Installed Main Pipe

Thousand Miles of Main

Source: AGA Analysis based on Department of Transportation data and EPA Inventory of U.S. Greenhouse Gas Emissions and Sinks 1990-2012
State Utility Commissions
Balance Costs to Ratepayers

• How fast can infrastructure be replaced?
• May depend on
  • miles of pipe, and
  • how many customers would share cost
• State Utility Commissions must:
  1. Consider cost impacts to consumers, and
  2. Allow utilities to recover costs, and
  3. Allow a just and reasonable return on equity (ROE) to attract capital.
Regulatory Lag

• The utility’s cost of service is based on historical amounts from a “test year.”

• Leads to “regulatory lag”

• Like being told by your boss –

  ‘Go travel on business for 5 to 10 years, save your receipts, and at the end, I’ll let you know whether I’ll reimburse you for any of it...’

➢ Need more timely and reliable cost recovery for major infrastructure replacement projects – e.g. trackers and surcharges
States with Accelerated Infrastructure Cost Recovery
Low Grade Leak Declines – NW Natural Cast Iron Main Replacement – with Cost Recovery
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