Lost and Unaccounted for Gas and Infrastructure Replacement for LDCs

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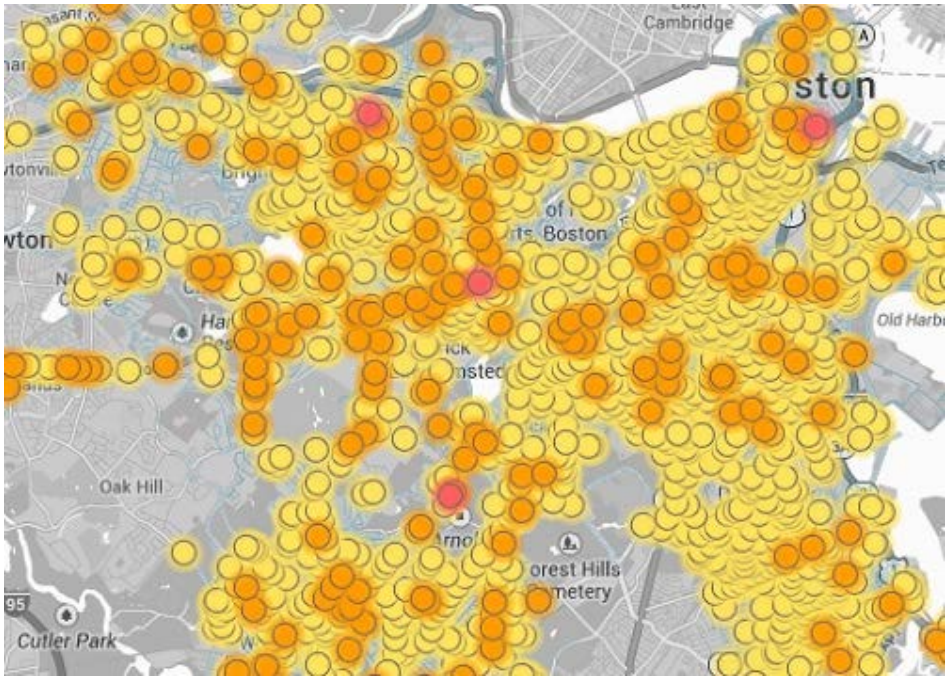
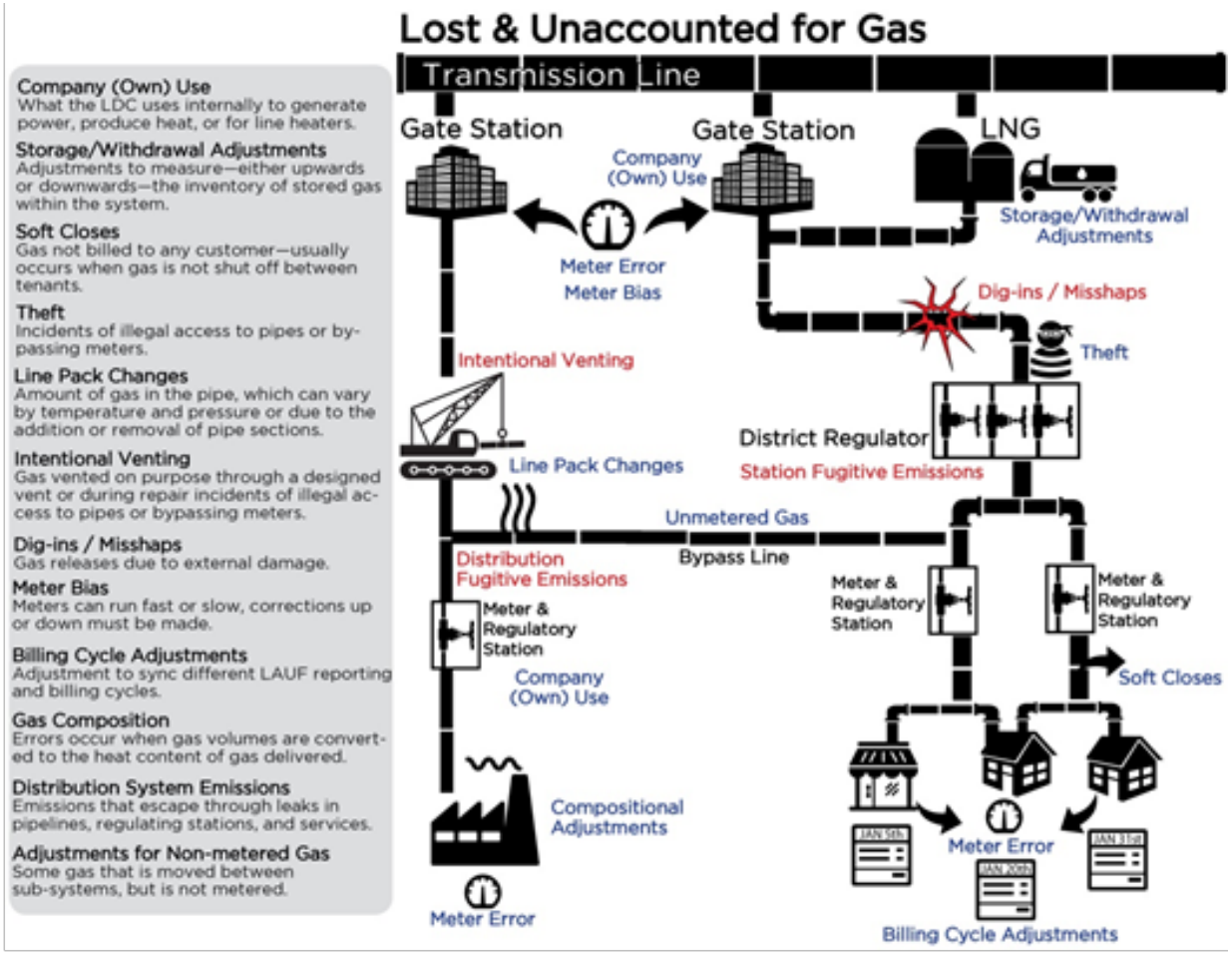
Why Are People Talking About This?

- Growing focus on methane emissions.
- Administration initiatives on methane reduction.
- Multiple recent reports and news stories on methane.
- Public concern over emissions, in part linked to broader concerns over gas production and infrastructure and even fossil fuel more broadly.

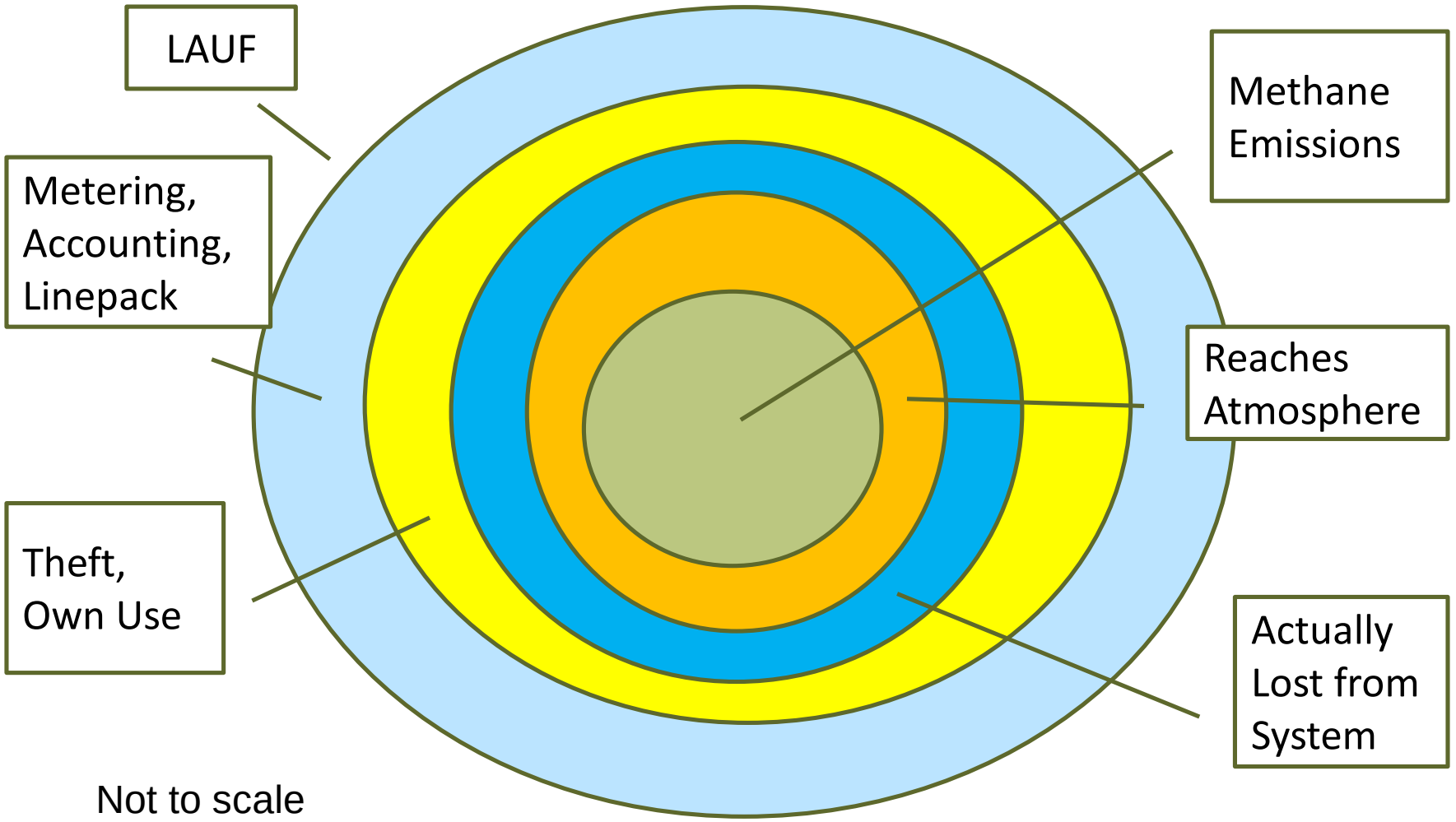


LAUF - What It Is?

- The difference between gas received and gas delivered.
- Made up of many components
- Calculated differently by different entities.
- Often a rate-making construct – not an emission factor.

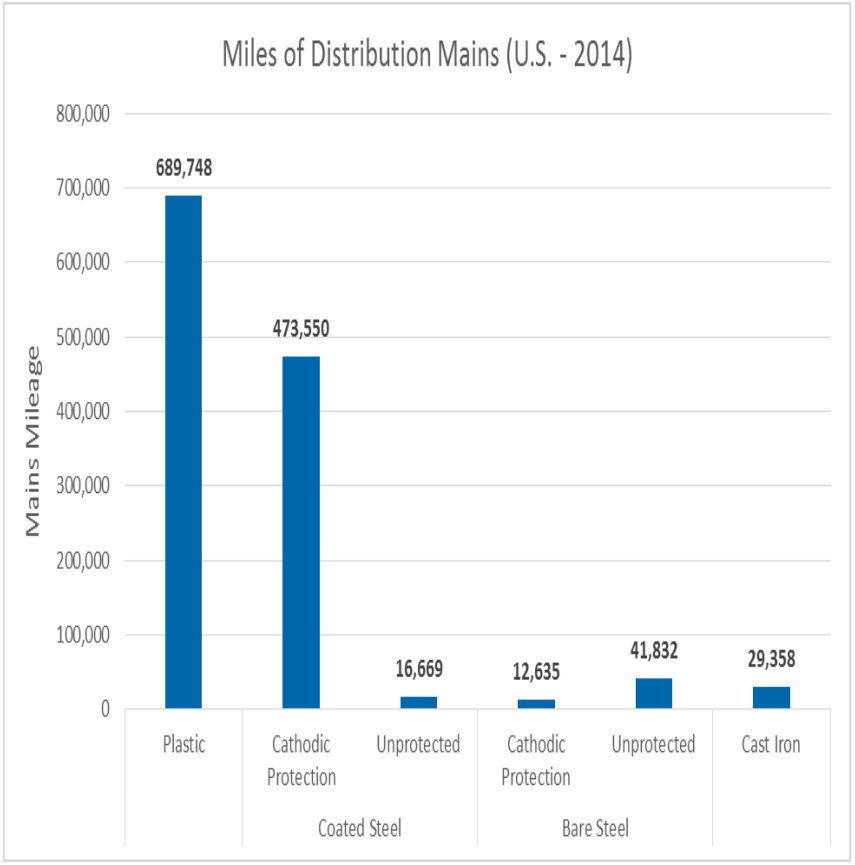


What It Isn't – A Surrogate for Emissions



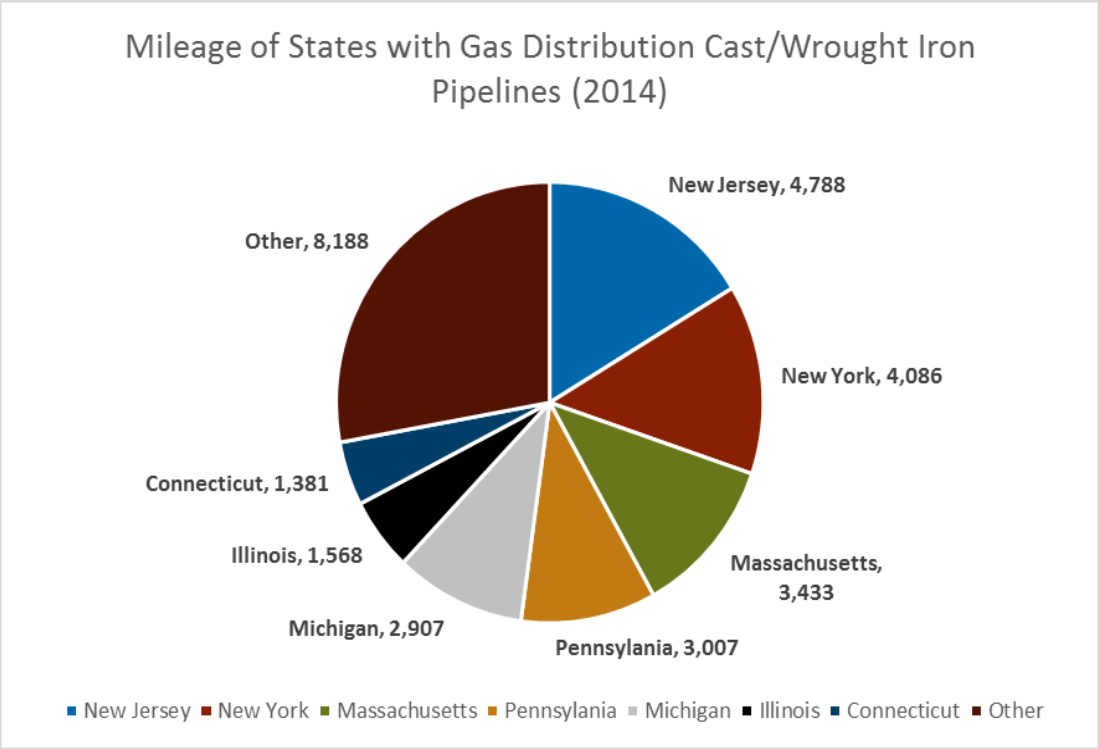
Infrastructure Replacement

- Focus on leak-prone pipe
  - Cast-iron
  - Unprotected steel
  - Older plastic
- A relatively small share of the mileage but a disproportionate share of emissions.



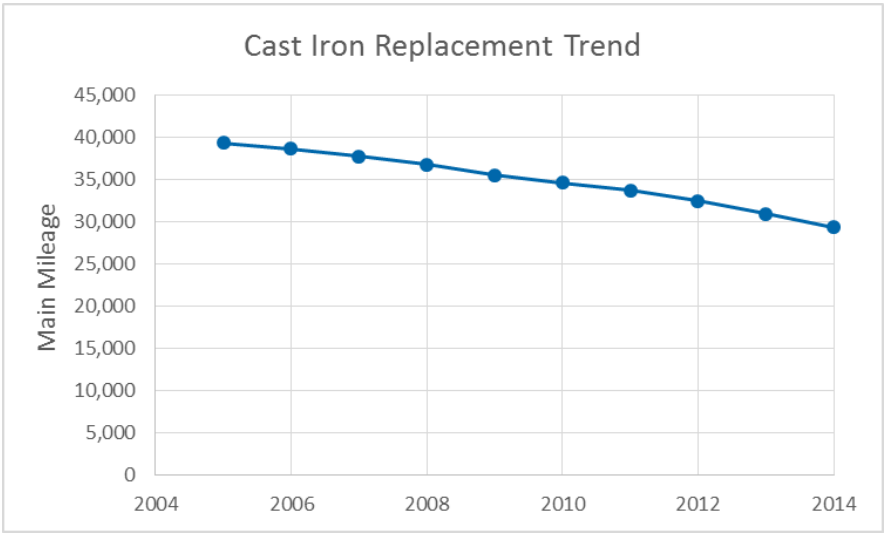
Infrastructure Replacement

- Most of the cast iron pipe is in only a few states.
- These are some of the highest-cost locations for replacement.
- Many states have other kinds of leak-prone pipe.



Cast Iron Replacement Trend

- LDCs have been replacing cast iron pipe for safety considerations – about 3%/year.
- Recent discussions have focused on the potential for accelerated replacement for environmental benefits.
- Environmental benefits are not part of the conventional utility rate-making construct.
  - Safe, reliable service at the lowest cost.



Regulatory Treatment of Pipeline Replacement

- Most states have some form of special rate structure to support cost recovery for pipeline replacement programs. Key components of such programs include:
  - Certainty of cost recovery
  - Timeliness of cost recovery
  - Setting targets for replacement
  - Providing incentives or penalties for performance
  - Incorporating emissions into the program
- California, Oregon, Illinois and Massachusetts have passed legislation focusing on LDC infrastructure. California's and Oregon's directly target methane emissions while Massachusetts' is purely focused replacement by a fixed deadline.

Barriers to Pipeline Replacement

- Cost
- Uncertainty of Cost recovery
- Adequacy of skilled labor
- Concern over potential rate-payer Impacts
- Lack of Regulatory Recognition for Innovative Technology
- Public Objections to Gas Infrastructure

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