



NCSL

December 6, 2013

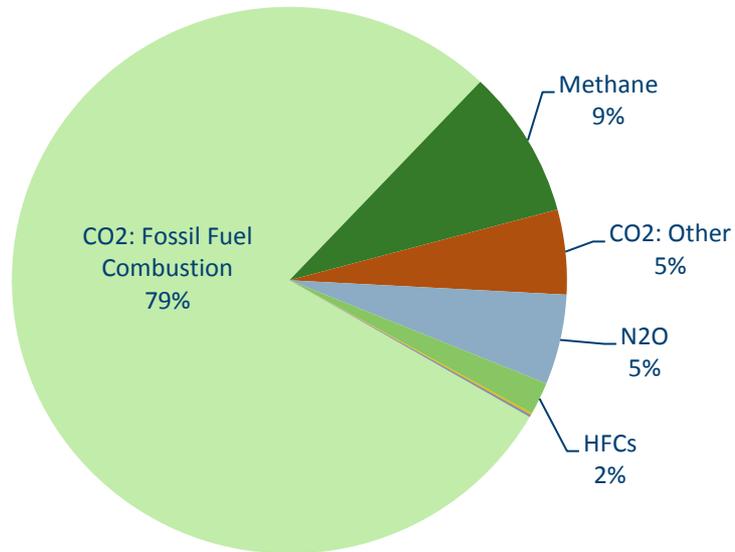
Erica Bowman
Vice President, Research and Policy Analysis



U.S. Greenhouse Gas Emissions

U.S. Greenhouse Gas Emissions: 2011

CO2 equivalent basis



Methane emissions comprise 9% of the total U.S. GHG emissions.

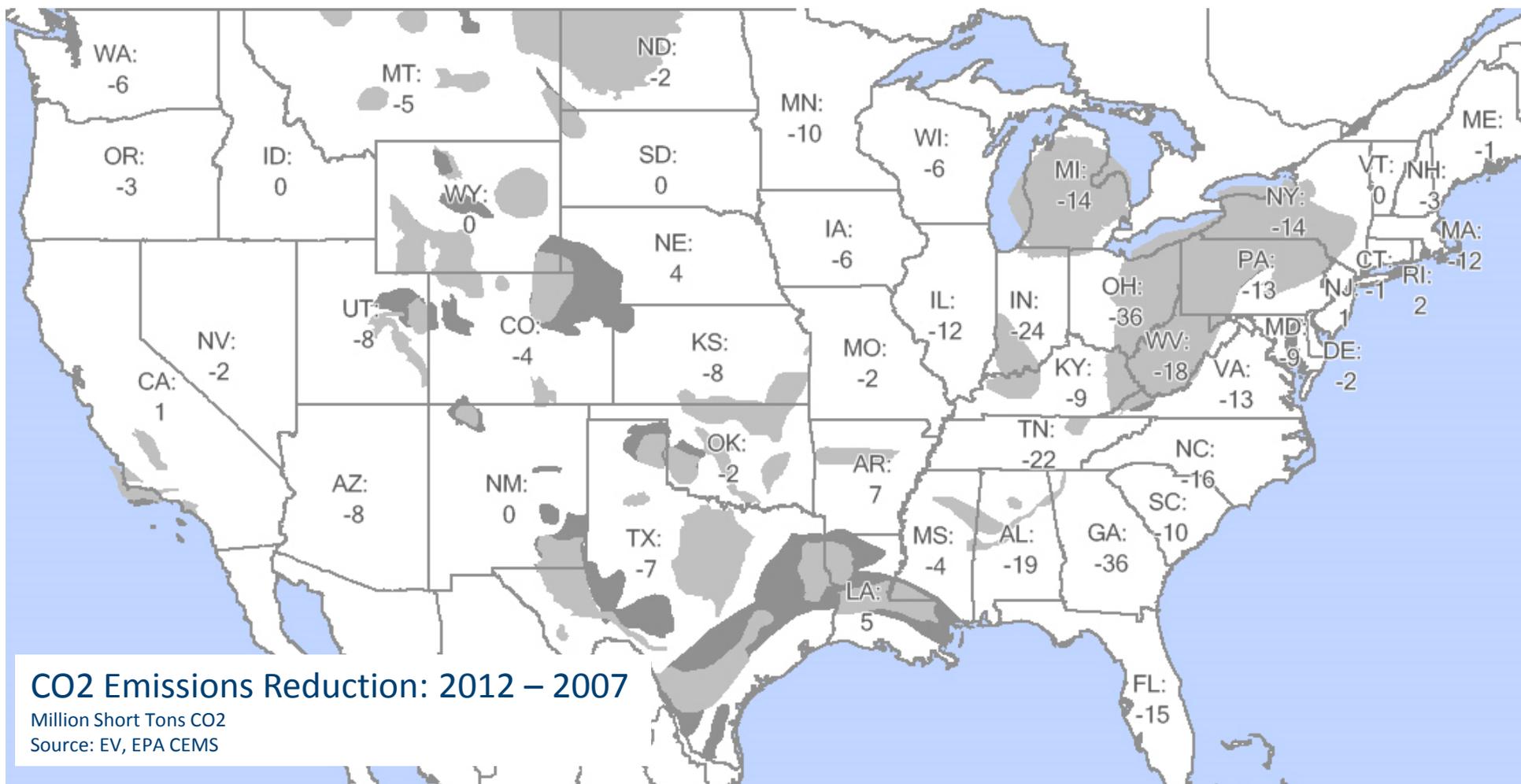
Of that 9%, natural gas systems comprise $\frac{1}{4}$ of those emissions.

Overall, methane emissions from natural gas systems contribute 2.2% towards total U.S. GHG emissions.

Source: EPA Greenhouse Gas Emissions Inventory for 2011.
Released April, 2013

Electric Sector CO2 Emission Reductions

In 2012, CO2 emissions were 14% less than those in 2007 in the electric sector. This was in large part due to higher natural gas utilization.



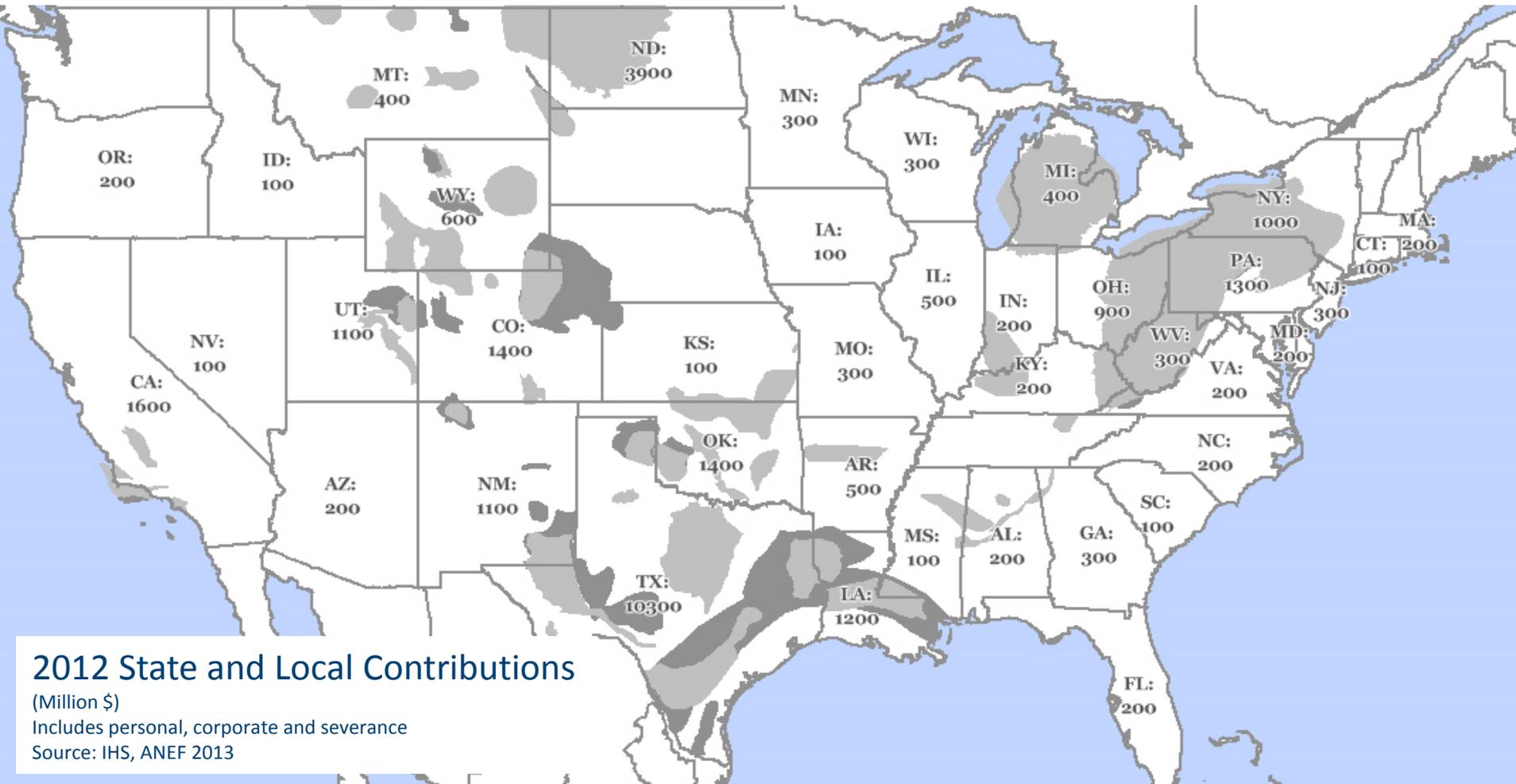
Employment from Unconventional Production

2012 U.S. Employment: 1.7 million
2020 U.S. Employment: 2.9 million



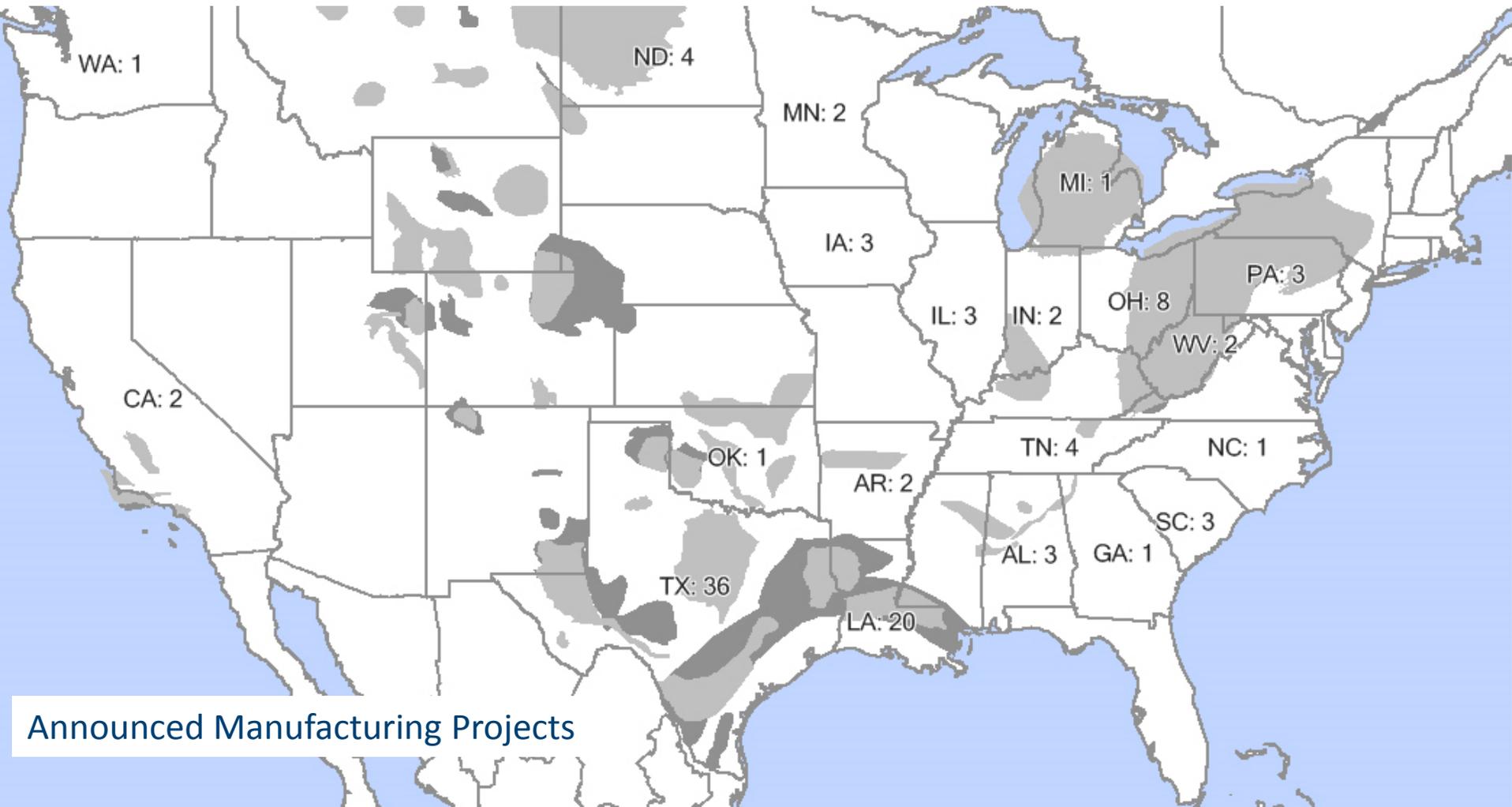
State and Local Tax Contributions from Unconventional Production

2012 State and Local Contributions: \$32 billion
2020 State and Local Contributions: \$60 billion



Proposed Manufacturing Investment

Over 90 manufacturing projects have been announced to come online by 2018.
Represents over \$110 billion in investment.



Announced Manufacturing Projects

Pipeline Inspection and Safety

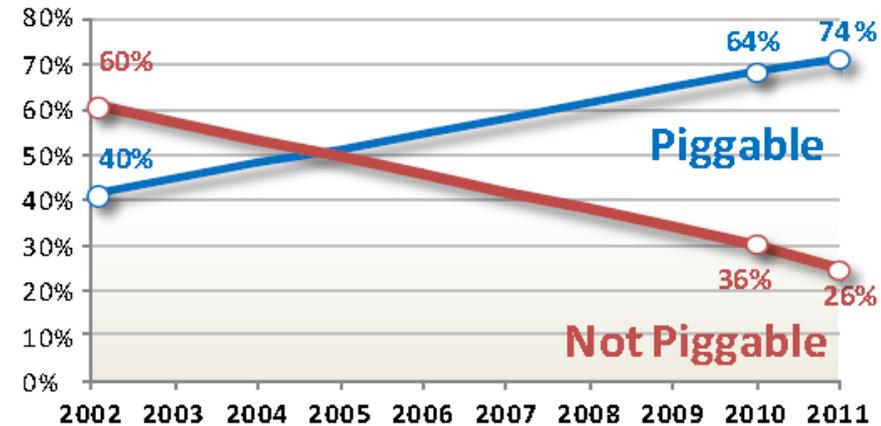
- The transportation of natural gas is one of the safest ways of transporting energy, and pipelines are the safest method of transporting natural gas.
- Pipeline companies routinely inspect their pipelines for corrosion and defects using sophisticated equipment known as “Smart Pigs”, intelligent robotic devices that evaluate the interior of the pipeline.
- Smart pigs can test pipeline thickness and roundness, check for signs of corrosion, detect leaks and any other defects along the interior of the pipeline that may impede the flow of gas or pose a potential safety risk.
- Many other safety precautions and procedures are in place to minimize the risk of pipeline accidents, including:
 - Aerial Patrols
 - Leak Detection
 - Pipeline Markers
 - Gas Sampling
 - Preventative Maintenance
 - Emergency Response
 - One Call Program – Call “811”



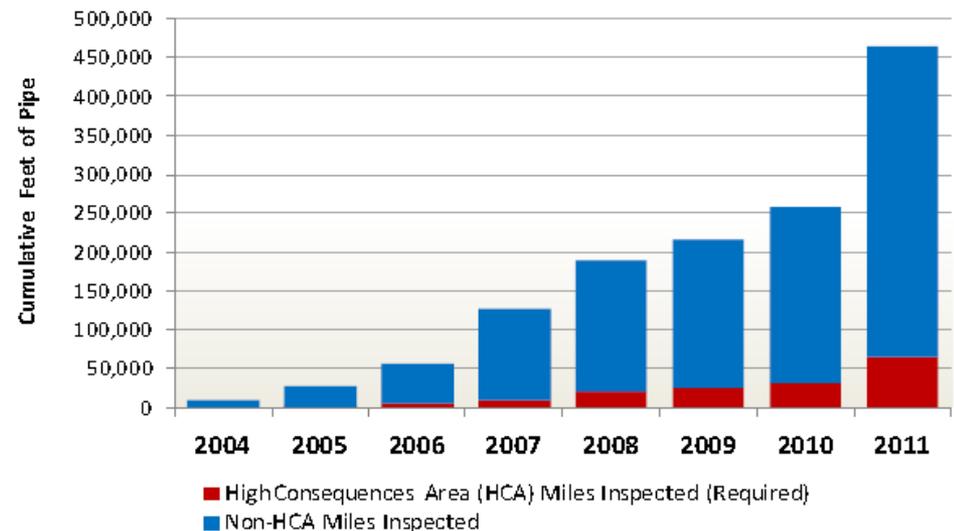
Industry Progress

- Interstate transmission pipelines have demonstrated commitment and made significant progress toward improving pipeline integrity, focused on three areas:
 - Making their systems capable of accommodating inline inspection tools
 - Performing assessments
 - Making necessary repairs and replacements
- In-line inspections are now viable on almost all transmission pipelines.

INGAA Membership



Total Cumulative Feet of Pipe Replaced (2004 – 2011)



Distribution Pipelines

- The American Gas Association is the expert on distribution pipeline safety
- Excavation damage is the leading cause of serious pipeline accidents.
 - The industry supports strong damage prevention laws
 - And supports improvements in operator/excavator engagements
- Several initiatives include
 - Emergency shut-off valve expansion
 - Advance technology through additional investment in pipeline safety technology development
 - Engage stakeholders and share information across groups including contractors, consumers and regulators