American Gas Association

• Founded in 1918

• Represents more than 200 local energy companies that deliver natural gas throughout the U.S.

• There are nearly 71 million residential, commercial and industrial natural gas customers in the U.S.; 92% receive their gas from AGA members
Natural gas pipelines are an essential part of the nation’s Infrastructure.

Together, natural gas pipeline and utility companies spend approximately $7 billion per year to help ensure the safety and reliability of the natural gas infrastructure.

AGA: Bringing All Stakeholders Together
Hazardous Liquid Transmission

• 184,000 miles
• Transported products includes:
  - Carbon dioxide
  - Crude oil
  - Highly volatile liquids (like propane)
  - Refined petroleum products (non HVL)

• Pipeline Safety Act of 1996 created the first integrity management plan. The first baseline assessments were completed in 2008.
Natural Gas Transmission and Gathering

- 307,000 miles
- 19,000 high consequence areas (HCAs)
- Pipeline Safety Act 2002 required integrity management assessments for all transmission pipeline in HCAs by 2012. The cost was estimated to be $6 billion.
- 18,700 miles of gas gathering
Natural Gas Distribution

- 1,290,000 miles mains
- 861,000 miles of service lines
- Transmission pipeline imbedded into the distribution system
- Pipeline Safety Act 2006 required a regulation to be create and have operators develop Distribution Integrity Management Plans by August 2011.
The AGA Operating Section: 16 Technical and Advocacy Committees and a Managing Committee

Focused on operational excellence in the safe, reliable and efficient delivery of natural gas

- Building Energy Codes & Standards
- Environmental Matters
- Gas Control
- Safety & Occupational Health
- Distribution Measurement
- Transmission Measurement
- Corrosion Control
- Underground Storage
- Utility & Customer Field Service
- Distribution Construction & Maintenance
- Distribution & Transmission Engineering
- Plastic Materials
- Supplemental Gas
- Natural Gas Security
- Operations Safety Advocacy
- Environmental Advocacy
- Transmission
- Managing Committee
Operations and Safety Focus Areas

- Safety
- Security
- Environment
- End Use

- Safety Enhancements
- Standards Development
- R&D
- Networking

- Best Practices
- Conferences
- Workshops/Audio
- Technical Committees

- Publications
- SOSs
- Surveys

Advocacy
Knowledge Sharing
Industry Growth
Member Support

Data Sources: Census Bureau, Energy Information Administration, PHMSA Annual Report Data, BTS ton-mile estimates, PHMSA Incident Data - as of Jan. 18, 2012
Pipeline Fatalities
(1986-2011)

Data source: DOT-PHMSA Incident data (as of Jan. 18, 2012)

$y = 23.102e^{-0.019x}$
(1.9% decline/yr.)
Pipeline Incidents w/Death or Injury (1986-2011)

- Data source: DOT-PHMSA Incident data (as of Jan. 18, 2012)

Mathematical model:

\[ y = 89.103e^{-0.034x} \]

(3.4% decline/yr.)
Brief Summary of 2011

It was a blur!

- San Bruno facts still unknown
- NTSB immediate safety recommendations
- Marshal Michigan Spill NTSB investigation
- Cast iron failures in Pennsylvania
- Secretary LaHood direct involvement
- Congressional hearings
- Media scrutiny
- No solution in sight
Closure Begins

2011

• NTSB final report and record number of safety recommendations
• Secretary LaHood shows satisfaction after CEO meetings
• Pipeline Safety Act reauthorized
Where are we?

2012

• Low natural gas prices and great opportunity for infrastructure development
• Industry commitments (AGA and INGAA)
  • AGA Commitment to Enhancing Safety
  • INGAA Integrity Management Continuous Improvement
• Pipeline Safety Act deadlines
• NTSB Safety Recommendations
• Infrastructure changes for next 2 to 20 years
• This presentation examines the barriers and opportunities to develop the path forward.

*Success requires that stakeholders Agree on the Path Forward*
The Path Forward

• Successfully moving pipeline safety to a higher level will require:
  • Extensive stakeholder discussions
  • Expedited rulemaking
  • Compromise
  • Billions of dollars in capital expenditures
  • Transparency for the public

Will we get this done?
Yes, but it will be more difficult than anyone imagines.
Roadmap FOR THE PATH FORWARD

- Pipeline Safety Act of 2011
- NTSB Safety Recommendations
- Secretary LaHood Action Plan
- AGA Commitment to Enhancing Safety
- INGAA Integrity Management Continuous Improvement (IMCI)

Five good documents. There are similarities, but they were developed for different purposes, are not aligned, present different messages and use different languages.
Pipeline Safety Act OF 2011

• AGA views the Act as the definitive template for the pipeline safety path forward

• The argument that industry just wants to do what the law requires does not take into account that complying with the legislation will take millions of man-hours and billions of dollars. Fundamental changes to the nation’s infrastructure are mandated.
Pipeline Safety Act **OF 2011**

- Excess Flow Valves Beyond Single Family Residential
  - Requires DOT to issue a final report on evaluation of NTSB’s recommendation (P-01-2)
  - Requires DOT to issue regulations, if appropriate, by January 2014 requiring the use of EFVs, or equivalent technology, where economically, technically and operationally feasible on new and replaced branch services, multi-family and small commercial facilities

*AGA members supported the legislation, gave regulators detailed implementation requirements and are ready to move forward without delay.*
Pipeline Safety Act of 2011

- **Remote and Automatic Valves**
  - AGA supported legislation. There is increasing pressure to automate more mainline valves.
  - Mandatory prescriptive installation of valves is not appropriate. Resources should be prioritized toward prevention rather than mitigation.
  - Should implement risked based retrofit on certain lines and new installation.
  - 192.935(c) is adequate for operating assessments (retrofits) and 192.179 should be amended for new design.
Pipeline Safety Act OF 2011

• Remote and Automatic Valves
  • Costs range from $40,000 to one million dollars
Pipeline Safety Act OF 2011

• Transmission MAOP Verification
  • Requires DOT to notify operators to confirm the MAOP records of T. lines in class three and four location and class one and two HCAs using elements considered appropriate by DOT by July 2012

AGA members are more than 50 percent complete using 192.619, AGA White Paper and 1998 PHMSA Guidance. PHMSA issued new guidance May 7, 2012.

• Operators must identify and submit to DOT documentation related to segments with insufficient records for established MAOP by July 2013
• For pipelines with insufficient MAOP records, DOT must:
  • Require operator to reconfirm a MAOP expeditiously
  • Determine what actions are appropriate until a MAOP is confirmed
• The PHMSA proposed using the annual report for reporting.
Pipeline Safety Act of 2011

- MAOP Grandfathering Rulemaking
  - DOT must issue regulations for conducting tests to confirm material strength for untested gas lines in HCAs >30 percent SMYS by July 2013. DOT must consider safety testing methodologies, including pressure testing, ILI and methods determined equally effective.

AGA members have an estimated 6,000 miles (14 percent) of pipeline that will have to be hydrotested, have reduced pressure or be abandoned to comply with the Act.
Pipeline Safety Act OF 2011

- MAOP Grandfathering Rulemaking
  - MAOP record verification needed to understand the scope of work for testing
  - Cost-benefit data must be collected
  - PHMSA proposed annual report tracking ALL miles of pipe records by MAOP method, pressure tested above 125%, unpiggable
  - Congress understood the magnitude of this mandate and requires DOT to consult with state commissions and FERC to minimize costs and service disruptions

California has eliminated the MAOP grandfather clause for transmission pipe. Industry will work with PHMSA to amend the MAOP grandfather clause in federal regulation.
Pipeline Safety Act of 2011

• Government Reports and Oversight
  • Damage Prevention: Requires DPT to conduct a study on the impact of excavation damage on pipeline safety, and report to congress by January 2014. Includes analysis of state exemptions and requirements.
  • Integrity Management: Requires the DOT to evaluate, by July 2013, whether TIMP requirements, or elements, should be expanded beyond HCAs. Analyze incremental costs of applying IM standards to pipelines outside of HCAs where operators are already conducting assessments beyond requirements.
  • Leak Detection and Hazardous Liquids: Requires DOT to submit a report to Congress on leak detection systems utilized by Hazard Liquid Operators by January 2013
  • Cast Iron Gas Pipelines: Requires DOT to conduct a follow-up survey to measure the progress that operators have made implementing plans for the safe management and replacement of cast iron pipelines by January 2013 and every two years thereafter.
Operators Continue to Implement DIMP and CRM

- **Distribution Integrity Management**
  - Huge state audit workload for 1600 pipeline operators plus master meter systems.
  - Very diverse regional safety issues
    - Cast iron replacements in Northeast and Mid-West
    - Service risers in Ohio and Texas
    - Vintage plastic in Western states

- **Control Room Management**
  - Heavy audit workload because every control system is unique
  - Renewed focus on integrating CRM with emergency response and installation of more RCVs/ASVs.
Recent Meeting and Initiatives

NTSB Investigation and Safety recommendation for the Marshal Michigan Oil Spill

• Additional Recommendation to Secretary, gas and liquid industries.

PHMSA Technical Advisory Committee Meeting

• Voted to amend regulations to require oversight of contractors during new construction of transmission and mains.

PHMSA Meeting on Incorporating Standards

PHMSA Research and Development Forum

PHMSA Spill and Leak Detection Workshop October 2012

PHMSA Data Workshop October 2012
Infrastructure Changes

2012 to 2032

- MAOP Records Verification
- MAOP Grandfathering Regulatory Amendment
- Installing RCVs and ASVs in Transmission
- Cast Iron Replacement and Management
- Vintage Plastic Pipe Replacement and Management
- EFVs for Multi-family and Small Commercial
- Install New Shale Pipeline Network
- Full Public Disclosure
Pipeline Safety Path Forward

*It will get done, but the path forward will be more difficult than anyone imagines*

*Success requires that stakeholders Agree on the Path Forward*
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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. There are more than 71 million residential, commercial and industrial natural gas customers in the United States, of which 92% — more than 65 million customers — receive their gas from AGA members. Today, natural gas meets almost one-fourth of the United States’ energy needs.