

NATURAL GAS:

# Moving Our Nation Forward



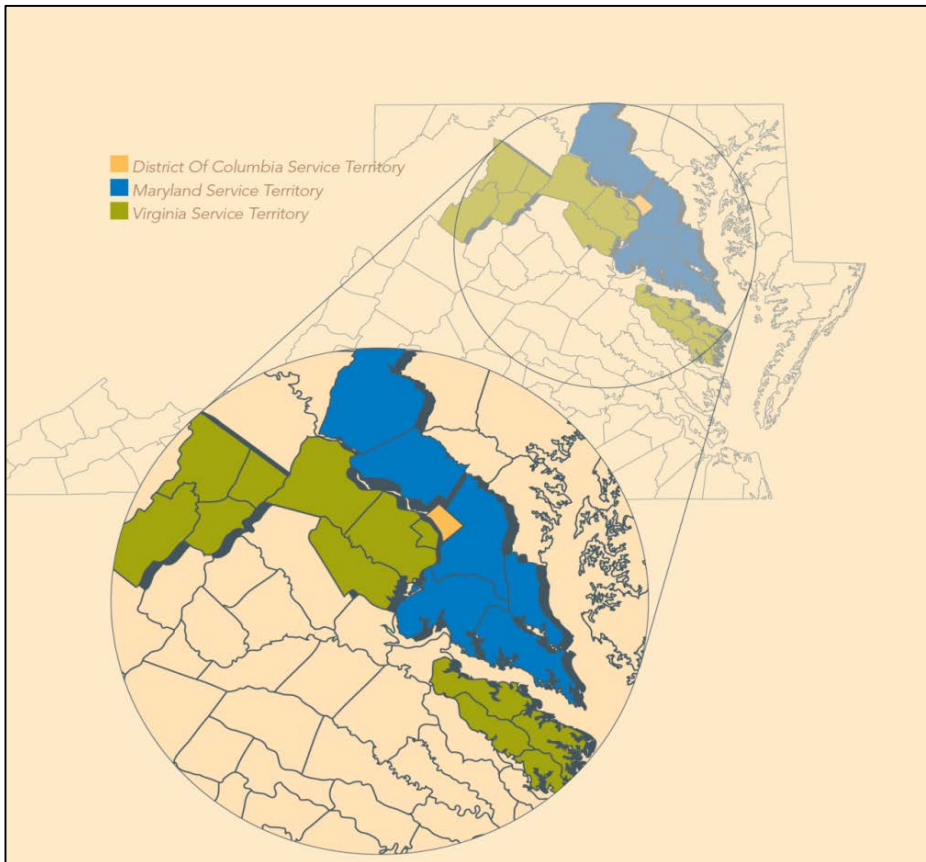
There is nothing more important to America's natural gas utilities than the **safety** of the customers we serve and the communities in which we operate.



*“AGA and its member companies are committed to promoting positive safety cultures among their employees throughout the natural gas distribution industry. All employees, as well as contractors and suppliers providing services to AGA members, are expected to place the highest priority on employee, customer, public and pipeline safety.”*

*— Excerpt from AGA Safety Culture Statement*

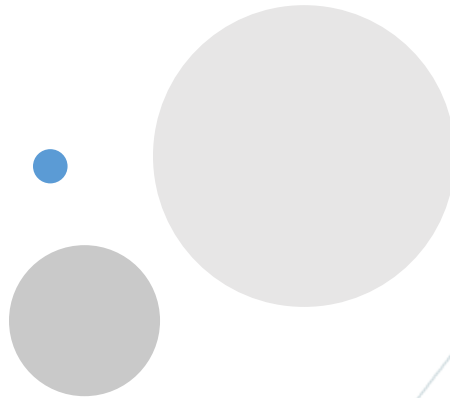
# Washington Gas



- Acquired by AltaGas in July 2018
- Washington Gas' franchise area covers over 6,200 square miles
- Over 5 million people
- Approx 1.2 million meters
- Approx 13,500 miles of main and 1 million services.
- Over 190 miles of Transmission Main
- 1,500 Employees
- Over 2,000 contracted labor resources

# Mergers and Acquisitions

- **Company Operations**
- **Resources**
- **R&D funding**



# Call before you dig.

Utilities throughout the country have developed innovative ways to promote awareness of 811 including sponsorships, mobile education and advertising. In 2014 and 2015, jockey Victor Espinoza won the Kentucky Derby wearing the 811 logo on his uniform.

Excavation damages for all underground facilities have decreased by approximately 53% since 2004



**Victor Espinoza**

*Kentucky Derby winner*

# Working with Excavators. Urban Area Challenges



# Continued Improvement

- **WG Damage Prevention ratio < 1.1 damages per 1,000 tickets**
  - Still equates to approximately 800 damages per year
- **Excavator Education – still a priority**
  - Interactive Tickets /EPR (clicks)
  - Ticket Boundaries – real time
- **Urban Area Locating –**
  - The older plant will be around for many years while surface areas change.
  - Congested underground – many abandoned and unclaimed infrastructure.
- **Regulators Demanding Better Performance**





## Inspecting Transmission Lines:

- Inspecting Small Diameter Pipe Interconnected Piping Systems
- Low Pressure Applications
- Vintage Construction Practices
  - *Affects the data received due to challenging girth weld/joint designs*
- Launching and Receiving Stations



# Natural Gas has made the U.S. an Environmental Leader

Natural gas is an important tool in the suite of greenhouse gas emissions reduction options available to the United States and a necessary component to limit carbon dioxide emissions nationwide.





As little as

**0.1%**

Of the natural gas delivered nationwide is emitted from local distribution systems.

Throughout the country, natural gas utilities are upgrading pipeline systems to make them safer and are driving down emissions in the process.

PIPELINE LEAKS  
DECREASED

**25%**

for pipeline mains

and  
**16%**  
for services

**SINCE 1990**

According to a nationwide field study led by Washington State University published in March 2015.



# Distribution

- **Better Tools and Practices:**
  - Employee Safety (AI/Robotics)
  - Leak Identification and Classification (methane volumes)
  - Reducing Methane Emissions (purging)
- **Better access to Data, Better Data Capture**
- **Customer Safety**
- **Regulatory Support**

# Looking to the Future

- **Carbon Neutral/ Electrification**
  - Pipe Replacement
  - New Customers
  - System Design
- **Customer Expectations**
  - Online self help
  - Efficiency and Control
- **Environmental Expectations**
  - Less Methane Emissions
  - More Efficient Appliances





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