Responding to Natural Gas Pipeline Emergencies

Florida Gas Transmission Company

A Panhandle Energy/El Paso Affiliate

Who is Florida Gas Transmission?

- Florida Gas Transmission operates nearly 5,000-miles of interstate natural gas transmission pipelines, a system that extends from South Texas to South Florida.

Who is Florida Gas Transmission?

- Only natural gas transmission pipeline in Peninsula Florida and largest pipeline operator in Florida.
- Transport natural gas to the citizens and industries of Florida.
- Safely operating in Florida for 40 years.

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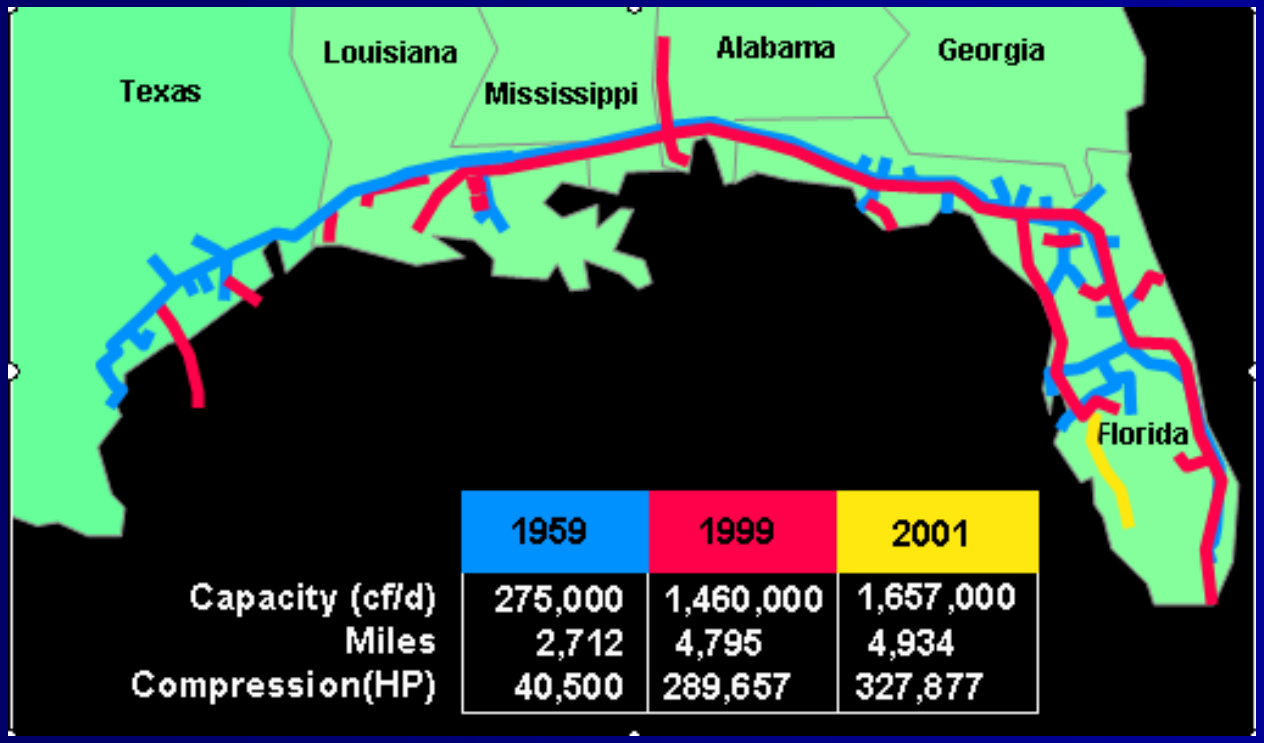
System Overview



	1959	1999	2001
Capacity (cf/d)	275,000	1,460,000	1,657,000
Miles	2,712	4,795	4,934
Compression(HP)	40,500	289,657	327,877

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Today's Agenda

- Pipeline Facilities
- Locating Pipelines
- Natural Gas Properties
- Hazardous Conditions
- Response
- Pipeline Personnel

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Natural Gas Pipelines

- Transmission pipelines known as the “interstate highway” for natural gas.
- High-strength, large-diameter steel pipe.
- Range in diameter from 6 to 48 inches.
- Moves trillions of cubic feet of natural gas from producing regions to market.
- Supply natural gas to local distribution companies, public utilities and power plants.

Compressor Stations

- Gas is transported at high pressure using compression (up to 1200 psi).
- Located approximately every 75 miles
- Large turbines, motors or engines pressurize the gas and move it through the pipeline.
- 15 compressor stations in Florida.

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Meter Stations

- The “city gate”
- Point where distribution company receives gas from transmission pipeline.
- Measures the flow of gas.
- Local utility reduces the operating pressure and may add an odorant.
- Local gas utility uses distribution pipes, or *mains*, to bring natural gas service to homes and businesses.

Mainline Valves

- Shut-off devices designed to stop the flow of gas.
- Some are manually operated, while others are either automatic or operated by remote control.
- Located every 15 miles along the pipeline.
- Valves should only be operated by qualified station personnel.

Lateral Line Block Valve

- Approximately 15 miles apart.
- Allows isolation of pipe section.
- Allow blow down “venting”.

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Pipeline Markers

- Transmission pipelines normally follow well-defined easements, and some share the same utility corridor.
- Pipeline markers alert you to the presence of pipeline.
- Markers contain the name of the operator and emergency contact information.
- Markers are located near road, rail, fence, water crossings & curbs.
- Markers do not necessarily represent the exact location of the pipeline facilities within the easement.

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Locating Pipelines

- Free service
- Assists excavators in marking the location of underground pipelines, as well as buried cable, telephone, electric and other utilities.
- Notification is required by law. Failure to notify could result in fine.
- Require 48 hours notice.

Local One-Call: (800) 432-4770

Properties

Natural Gas

- Since emergency officials may arrive at the scene before pipeline personnel, you should know in advance what to expect and how to respond.

Properties

Composition

- Naturally occurring hydrocarbon mixture.
- After being processed, it is composed mostly of methane (about 94%) and also contains ethane (about 4%).

Non-toxic

- Natural gas is non-toxic.
- Sometimes listed as a “hazardous material” due to its flammability, not due to toxicity.

Properties

Lighter than Air

- 40% lighter than air.
- In an open area, natural gas rises into the air and dissipates.
- In an enclosed area, it collects first near the ceiling.
- Suffocation can occur if natural gas displaces the oxygen in an enclosed area.

Flammable Within Narrow Limits

- Will ignite only within a narrow range: approximately 4-16% gas-to-air mix.
- Above or below that combustion will not occur.

Properties

Odorless

- Natural gas is a colorless, odorless substance in its natural state.
- Smell often associated with natural gas is normally added by the LDC.

Combustion Products

- No significant releases of harmful compounds as a result of natural gas combustion.
- Incomplete combustion may produce carbon monoxide and warrant the use of self-contained breathing apparatuses by emergency response teams.

Properties

Ignition Temperature

- Very high ignition point, twice as high as that of gasoline.
- A flame or spark must reach approximately 1200 degrees Fahrenheit to ignite natural gas.
- Static electricity, pilot lights, matches and sparks from telephones, electric motors and internal combustion engines exceed this temperature.

Hazardous Conditions

- Due to the large volumes and high pressures, accidents involving natural gas transmission pipelines can be dangerous.

- There are three primary hazardous conditions you should be aware of:

  - Encroachment
  - Leak
  - Rupture

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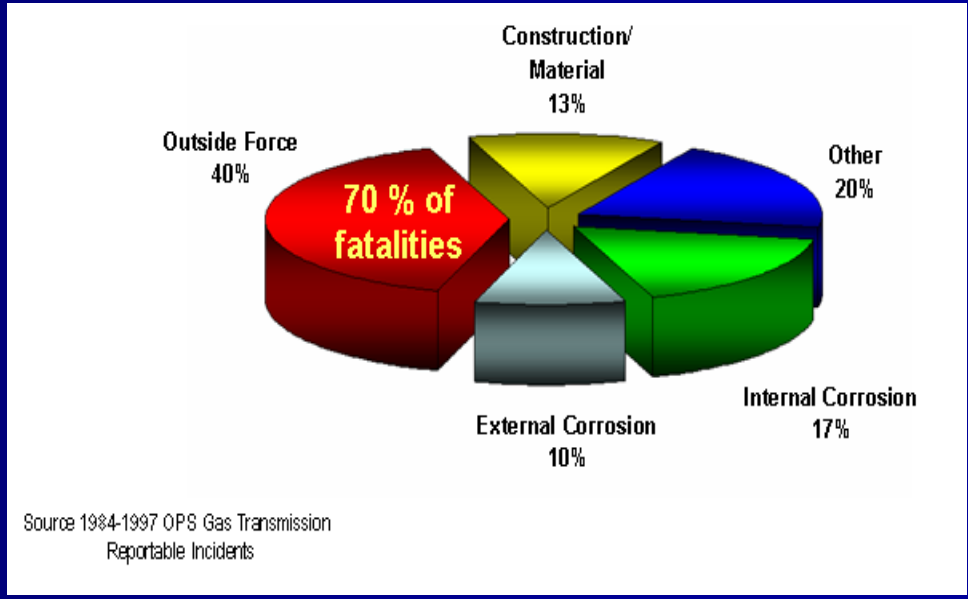
Encroachment

- If you notice excavation near a pipeline right of way, check to see if the contractor has notified the pipeline company or one-call about their work.



- Nearly 2/3 of fatalities involving pipelines are due to damage from outside forces.

Leak

- Natural gas is a colorless, odorless substance.
- Local utilities add a harmless odorant to help consumers smell gas should a leak occur.
- Odorant is added at only certain places along the pipeline, so you may not always be able to detect a leak by smell.
- Odorant is heavier than air, therefore the strong smell of natural gas odorant does not always mean that methane is present. Always use a methane detection instrument to determine if natural gas is present.

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Leak

The following signs can be an indication of a natural gas pipeline leak:

- Dust, water, or vegetation blowing around a pipeline
- Discolored or dead vegetation near a pipeline
- A hissing sound
- Bubbling in a wet area, marshland, river or creek
- A dry spot in a moist field

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Leak

- If you become aware of a leak, look for the nearest pipeline marker and call the emergency phone number listed.

Rupture

- More dramatic indicators.
- Loud roaring sound of escaping gas.
- Does not always lead to a fire, but if it does the resulting explosion can result in a large flame burning at high temperatures.

- Fire and emergency officials should be aware of the potential for secondary fires and disturbed earth in the vicinity of a rupture.

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Response

- Upon the first indication that a natural gas pipeline may be leaking or ruptured, **notify the pipeline company immediately**.

- The phone number on the pipeline marker will connect you with the company's 24-hour emergency gas control center.

- The gas control center will dispatch company representatives to the area where the incident has occurred. While that representative is en route, stay in close contact with the pipeline company.

Response

- Park vehicles a safe distance from the incident and turn off engines.
- Clear the area around the site and evacuate people to an upwind location.
- Provide first aid and call for additional emergency medical assistance if needed.
- Barricade the area and keep onlookers a safe distance away.
- Keep roads to and from the site clear for emergency and pipeline personnel.

What To Do

- Do not extinguish the gas fire with water or other chemicals (high probability of re-ignition and explosion).
- The best method to control a gas-fed fire is to stop the flow of gas.
- Do not try to operate pipeline valves.

- Extinguish perimeter fires and wet down exposed flammable areas in the vicinity. Radiant heat from the gas fire is intense and can cover a large area.

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Do Not

- Do not forget to notify the pipeline company immediately.
- Do not smoke or operate spark-producing devices if unignited combustible gas is suspected.
- Do not operate a pipeline valve at any time.
- Do not attempt to extinguish flames of escaping burning gas. Use spray only to protect surrounding exposure.

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Pipeline Personnel

- Trained for pipeline emergencies. Can supply you with information regarding the facilities involved in the incident.
- Pipeline response team will stop the flow of gas to the accident site.
- Damaged section is isolated by closing valves on either side of the rupture.
- Any fire will burn itself out once the fuel is consumed and the remaining gas will be vented to the atmosphere.

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Emergency Contact

Gas Control

1-800-238-5066

Local Contact

XXX-XXX-XXXX Office)

XXX-XXX-XXXX (Cell)

Coordinated Response

- Company personnel will follow these steps during an emergency.

1. Site Management and Control
2. Identify the Problem
3. Hazard and Risk Evaluation
4. Select Personal Protective Clothing and Equipment
5. Information Management and Resource Coordination
6. Implement Response Objectives
7. Decontamination and Clean-up Operations
8. Terminate the Incident

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Coordinated Response

- Pipeline emergencies require coordination of information and resources among the various players in order to safely and efficiently resolve the situation.

- Florida Gas Transmission's response protocol is based on the Eight Step Process© contained in the National Incident Management System.

Learn More

...about pipelines operating in your jurisdiction

- Visit the National Pipeline Mapping System (NPMS) at www.npms.rspa.dot.gov.

- Created by the Department of Transportation, Office of Pipeline Safety

- Local and state emergency response officials can access data pertaining to interstate and intrastate gas and hazardous liquid transmission pipelines.

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Our Commitment

- We are strongly committed to operating a safe, reliable pipeline system. As part of that commitment, we strive to strengthen and expand our relationships with emergency responders.

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Emergency Preparedness

- If you are interested in training opportunities, please let us know...

- Safety Meetings on a Regular Basis
- Conducting Table Top Exercises
- Participating in Mock Drills
- Conducting Incident Inquiries
- Enhancing Incident Management Training

...Questions?