

## Meeting Instructions



Mic

Mute Microphone



Chat

Sign In

- Your full name
- Full agency name



Raise

Ask Questions

- Raise hand
- Type in chat



# Pipeline Incident Response for Emergency Responders

# Contact Information



## **Emergency Responders Hotline**

1.800.767.8048

## **Non-Emergency Contacts**

**Jake Dukett**

217-358-6575

[jdukett@ameren.com](mailto:jdukett@ameren.com)

**Chris Schildroth**

314-805-9758

[cschildroth@ameren.com](mailto:cschildroth@ameren.com)

# About this Course



This course is designed to provide awareness for emergency responders who are required to respond to an incident involving a pipeline release or leak.



# About Ameren Illinois



At Ameren Illinois, safety for our employees, first responders, and customers is always our top priority. Electricity and Natural Gas power our homes, communities, and lives.

## **Types Of Pipelines**

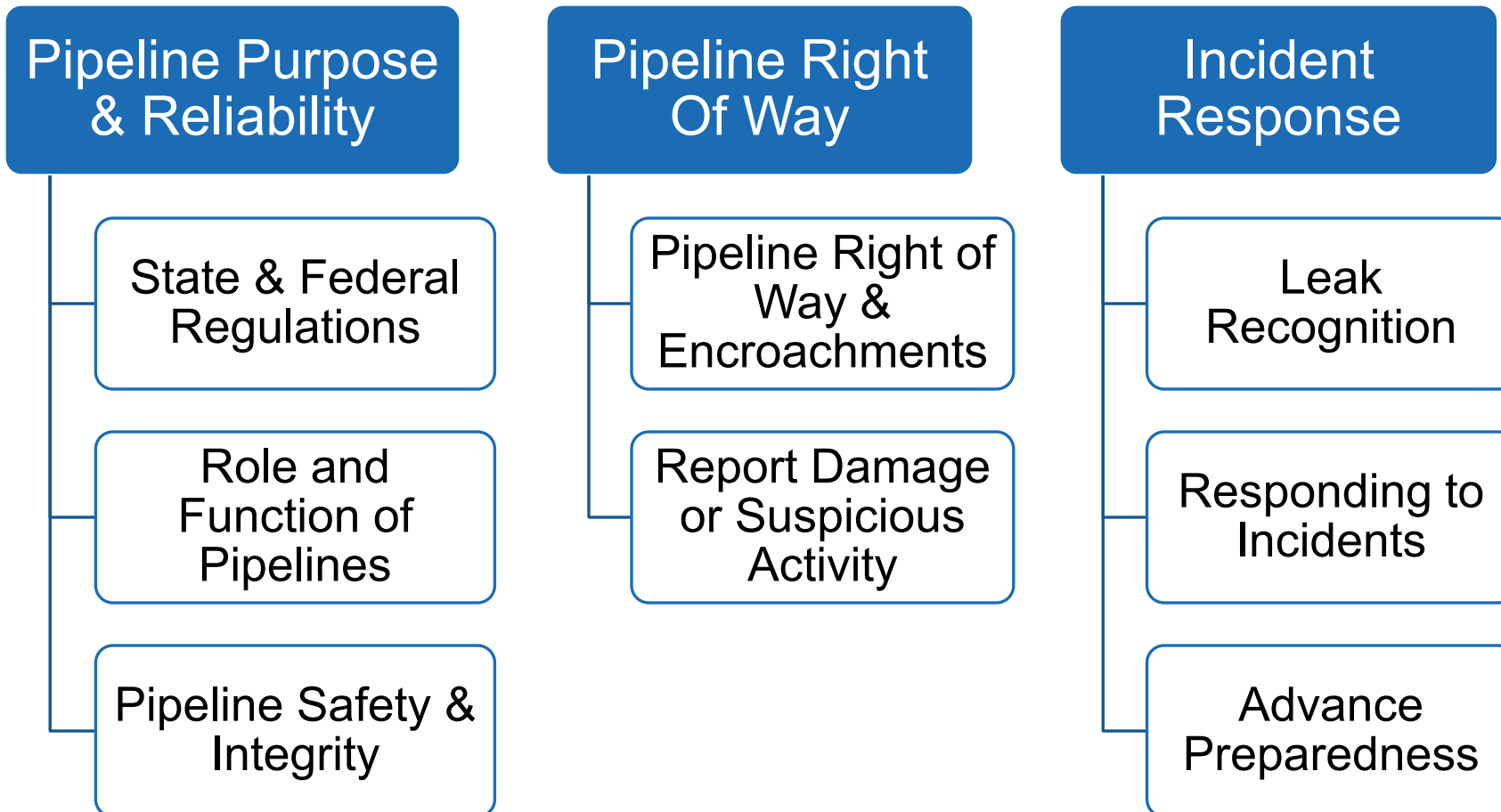
**Gathering pipelines** link natural gas sources to central collection points. Gathering pipelines also connect to transmission pipelines for long distance transportation of natural gas.

**Transmission Pipelines** are used to transport natural gas from their respective gathering systems to refining, processing, or storage facilities. Transmission pipelines also transport refined natural gas to customers, for use or for further distribution.

**Distribution and service lines** deliver natural gas to our customers.

# Overview

# Overview



# Pipeline Purpose and Reliability



# Overview of Pipelines

## Objective

1. Identify regulatory agencies for the pipeline industry.
2. Review roles and functions of pipelines.
3. Recognize safety and integrity standards for pipelines.



# Federal Regulatory Agency



**Pipeline and Hazardous  
Materials Safety Administration**

US DOT Pipeline and Hazardous Materials Safety Administration (PHMSA) oversees INTERSTATE pipelines

- Pipelines that cross state borders (transmission pipelines)
- Monitor compliance
- Programmatic inspections
- Incident investigation
- Direct dialogue

# State Regulatory Agencies




## **Illinois**

Illinois Commerce Commission

[www.icc.illinois.gov/home/illinois-gas-pipeline-safety-program](http://www.icc.illinois.gov/home/illinois-gas-pipeline-safety-program)

# Role and Function of Pipelines

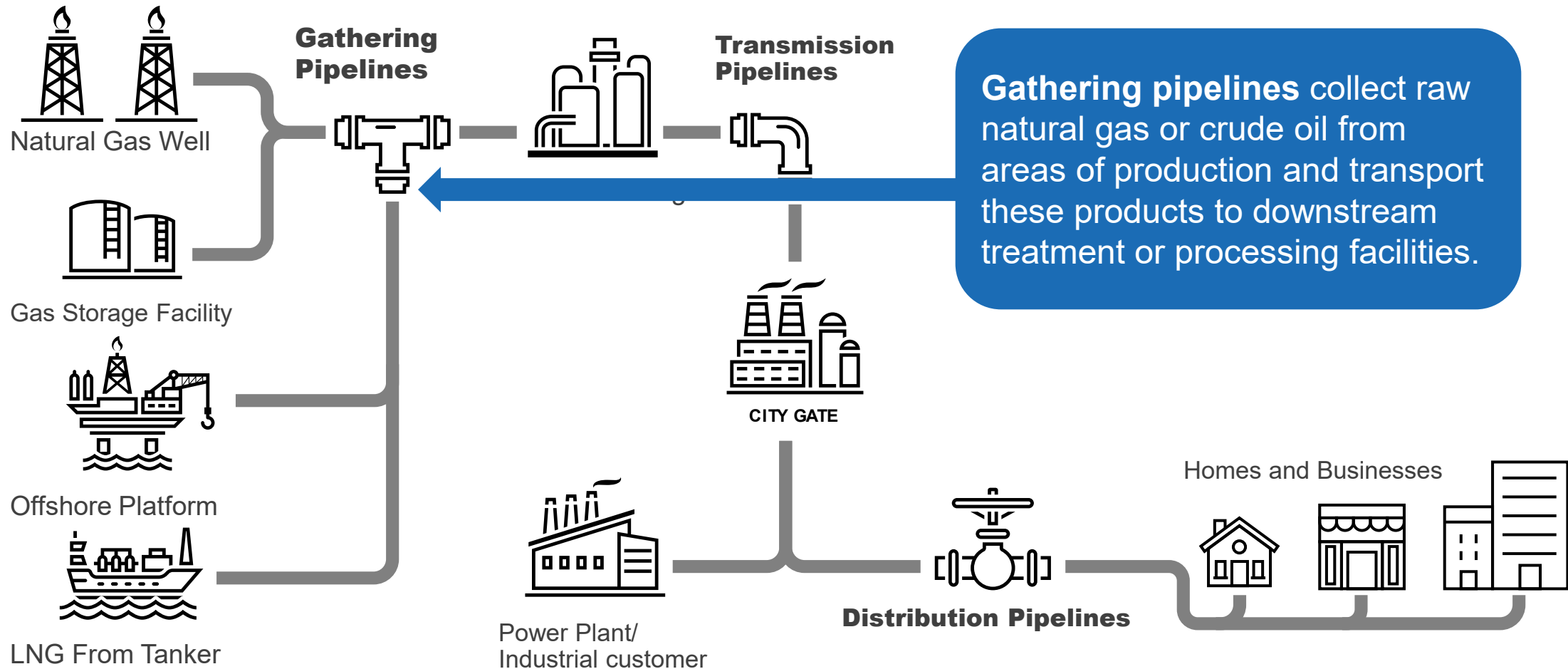


What are  
pipelines?

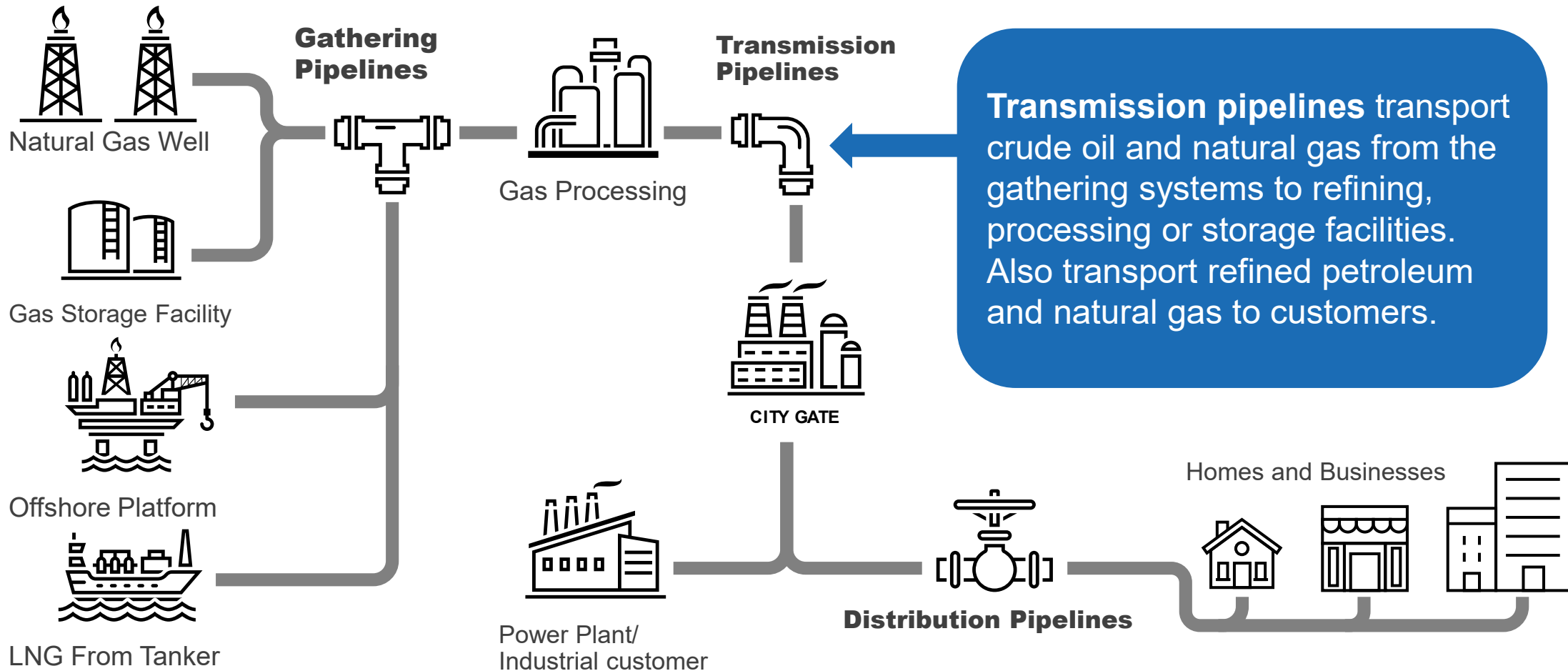
Where are  
pipelines?

Why are  
pipelines  
important?

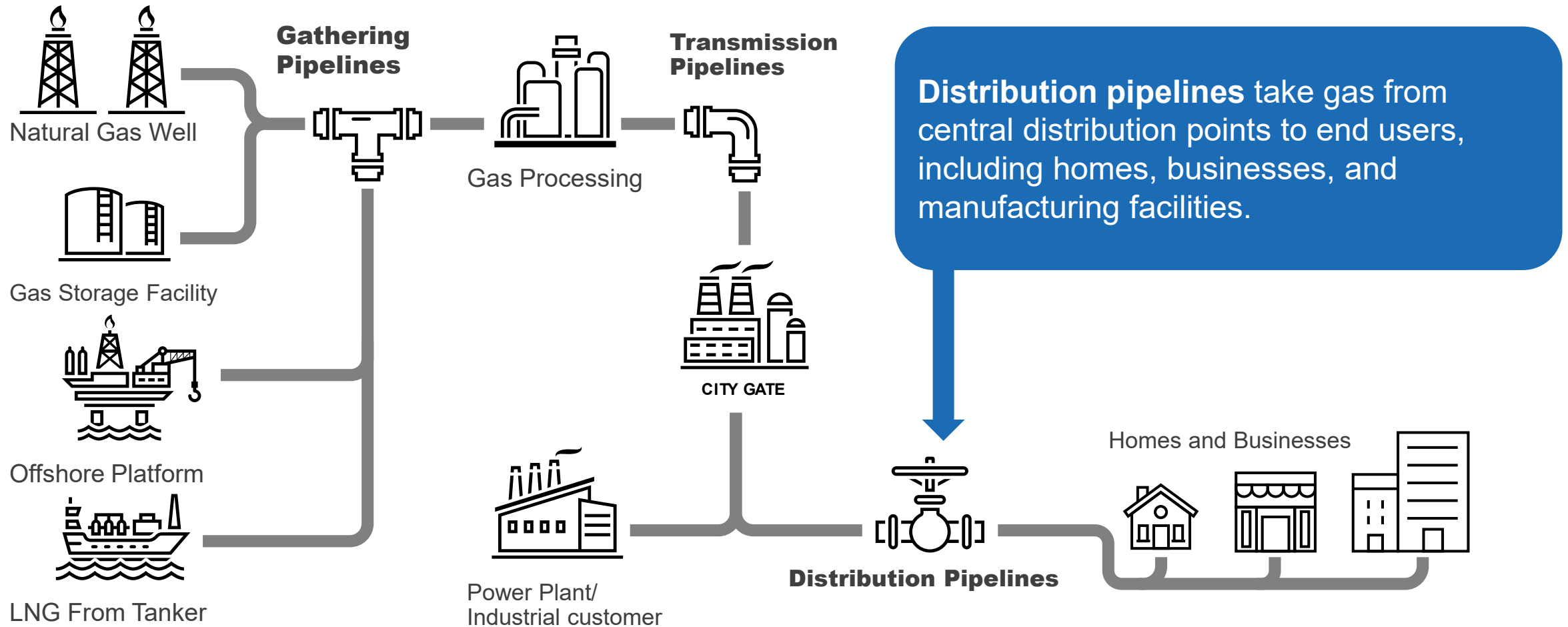
# Roles and Functions of Pipelines



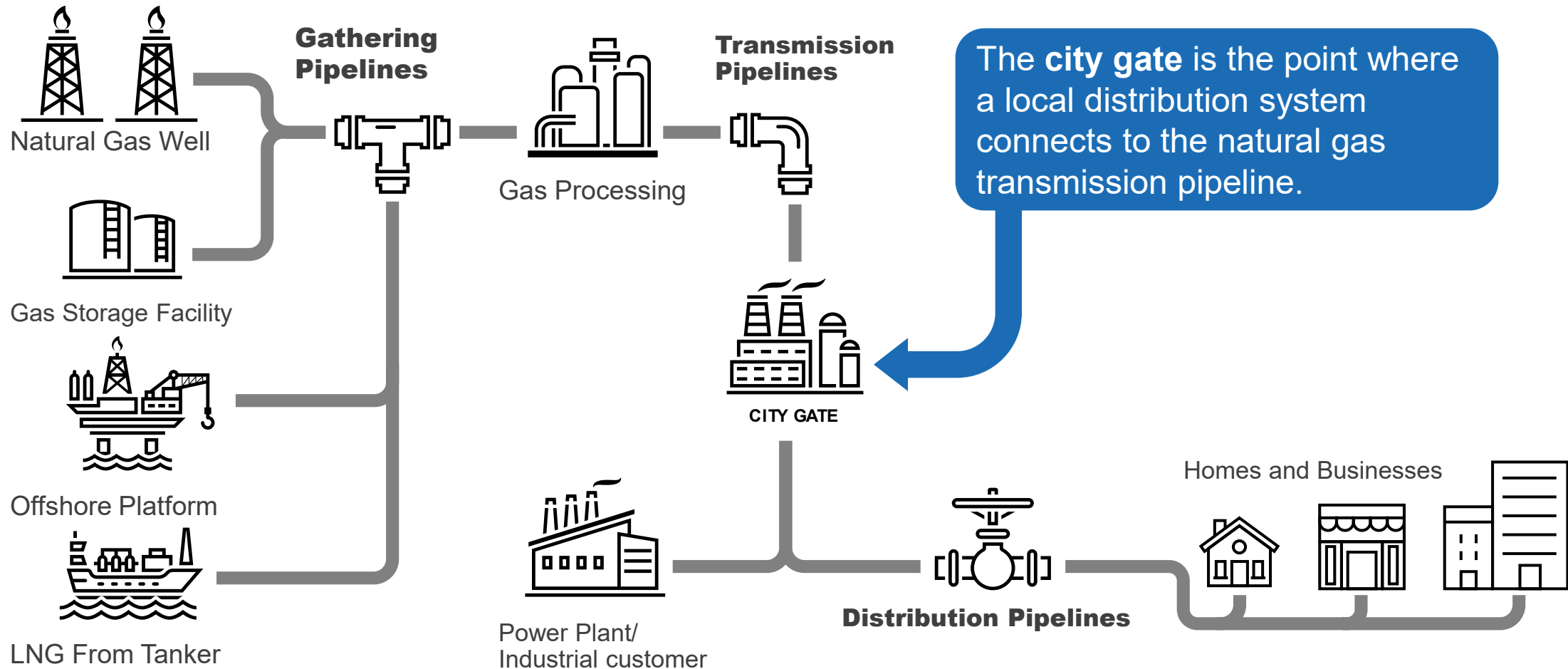
# Roles and Functions of Pipelines



# Roles and Functions of Pipelines



# Roles and Functions of Pipelines





# National Pipeline Mapping System



- Allows public access to view pipeline maps
- Search for pipeline operator contact information in a selected county, state, or zip code.
- Transmission Lines ONLY
- [www.npms.phmsa.dot.gov](http://www.npms.phmsa.dot.gov)

# Pipeline Safety and Integrity

There are several layers of safety to prevent damage to pipelines

- Markers and signs
- Pipeline control centers
- High-consequence areas: (highly populated)
- Ground and walking surveys
- Internal cleaning and inspections
- Pigging
- Cathodic protection



# High Consequence Areas – HCA's

- Populated areas include both high population areas and other populated areas
- Drinking water sources include those supplied by surface water or wells and where a secondary source of water supply is not available.
- Facility occupied by persons who are: confined, of impaired mobility or would be difficult to evacuate





# Pipeline Control Room

- Operates 24 hours a day / 7 days a week
- Monitors pressure, flow and volume
- Uses SCADA (Supervisory Control and Data Acquisition) to input commands to remotely operate pipeline control equipment
- Some may have remote shut off capability (DO NOT shut off valves – wait for an Ameren Illinois representative)



# Walking Surveys/Pigging/Cathodic Protection

## Walking surveys:

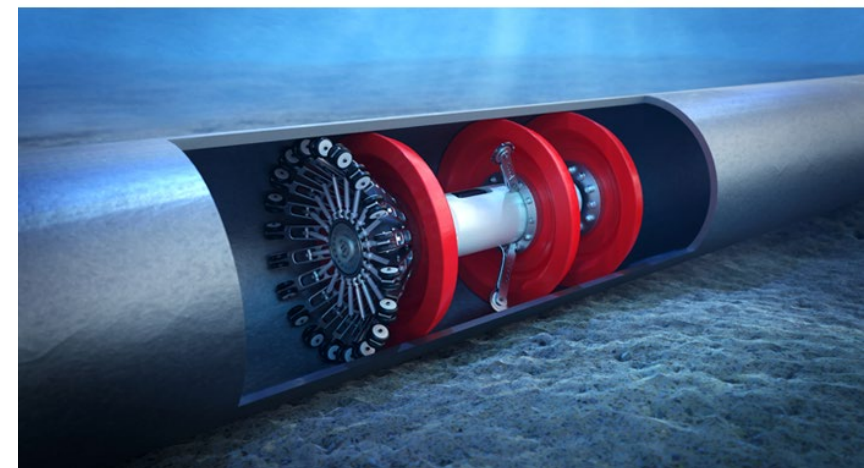
- Potential leaks
- Unlawful encroachments
- Unsafe excavations

## Pigging:

- Clean and inspect their pipelines to ensure safe, proper operation

## Cathodic protection:

- Low-voltage current on the pipeline
- Deters corrosion of the pipe



# Pipeline Right of Way

# Pipeline Right of Way

## Objectives

1. Explain pipeline right-of-way guidance.
2. Describe how to report pipeline damage.



# Right-of-way & Encroachment

- Land on either side of a pipeline
- Provides access for operators to perform maintenance on pipelines, valves, etc.
- Protects from encroachment
- Restricted from building, planting, storing or traveling
- Creates an Exclusion Zone

**Pipeline markers are found within the right-of-way**



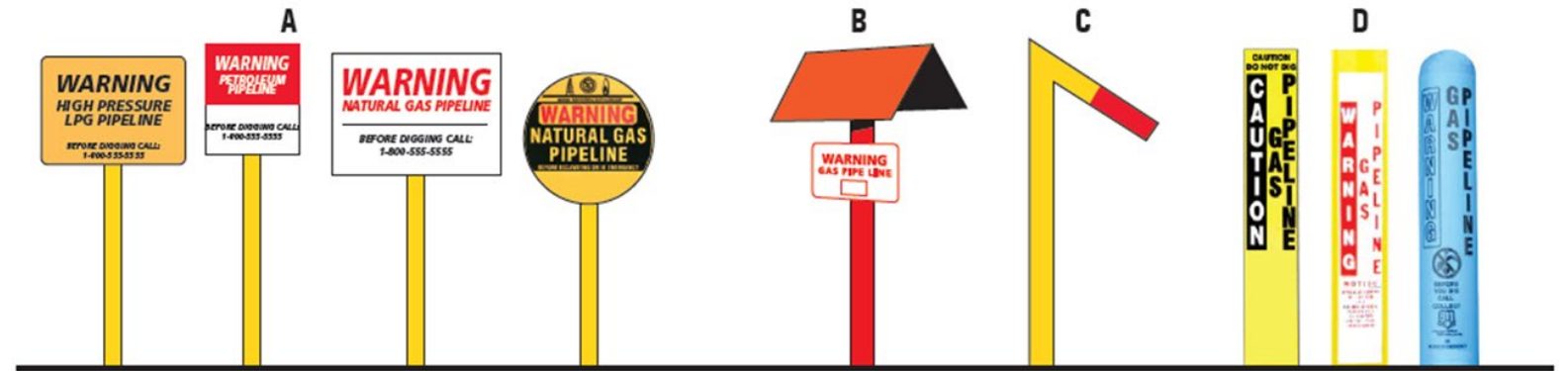
# Pipeline Markers

## Does Show:

- Product Name
- Company Name
- Emergency Number

## Does NOT Show:

- Size or Pressure
- Exact Location
- Depth



**It is a federal violation to intentionally damage or remove a pipeline marker**

# Reporting Damage or Suspicious Activity

If there is damage **CONTACT 911 IMMEDIATELY!**

If you observe suspicious activities, contact your local law enforcement agency.

- Describe specifically what you observed, including:
  - **Who** or **what** you saw;
  - **When** you saw it;
  - **Where** it occurred; and
  - **Why** it's suspicious.

Remember!! **“If you see something, say something”**

# Incident Response

# Incident Response

## Objectives

1. Recognize a potential pipeline leak.
2. Identify procedures for incident response.
3. Explain mitigation measures for preventing pipeline incidents.

# Potential Hazards

Although pipeline incidents are relatively rare, accidents do occur.

- Excavators not calling 811 for proper markings prior to excavation
- Corrosion and Material Defects
- Natural and Environmental Factors
- Operational and Mechanical Errors

# Potential Hazards

## Cross Bores

A cross bore occurs when the gas line intersects an existing underground utility such as a sewer line.

- Happens when trenchless technology (horizontal directional drilling or directional boring) is used
- Can get cut when cleaning a sewer line
- Leaking natural gas in the sewer system can create a significant safety risk





# Leak Identification

- Knowing how to recognize and respond to a possible leak or release is key in pipeline safety.
- A leak or release can be recognized by three senses:
  1. Sight
  2. Sound
  3. Smell



# Leak Identification



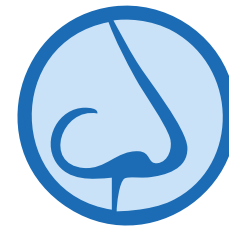
## You may see

- White cloud or fog
- Discolored plants or vegetation
- Flames or vapors near the pipeline
- Water bubbling for no reason



## You may hear

- Hissing
- Roaring
- Bubbling



## You may smell

- Products can be odorless
- Transmission vs. distribution
- Odorants (mercaptan, etc.)
- Mercaptan can smell like a skunk or rotten egg
- Some smells are dangerous!

# Leak Identification

- Knowing the product that is piped through your jurisdiction is important
- Contact local pipeline operators to help identify products
- Product charts can be found in the ERG
- Responders should reference the ERG when responding to a pipeline incident (free download, smartphone app)

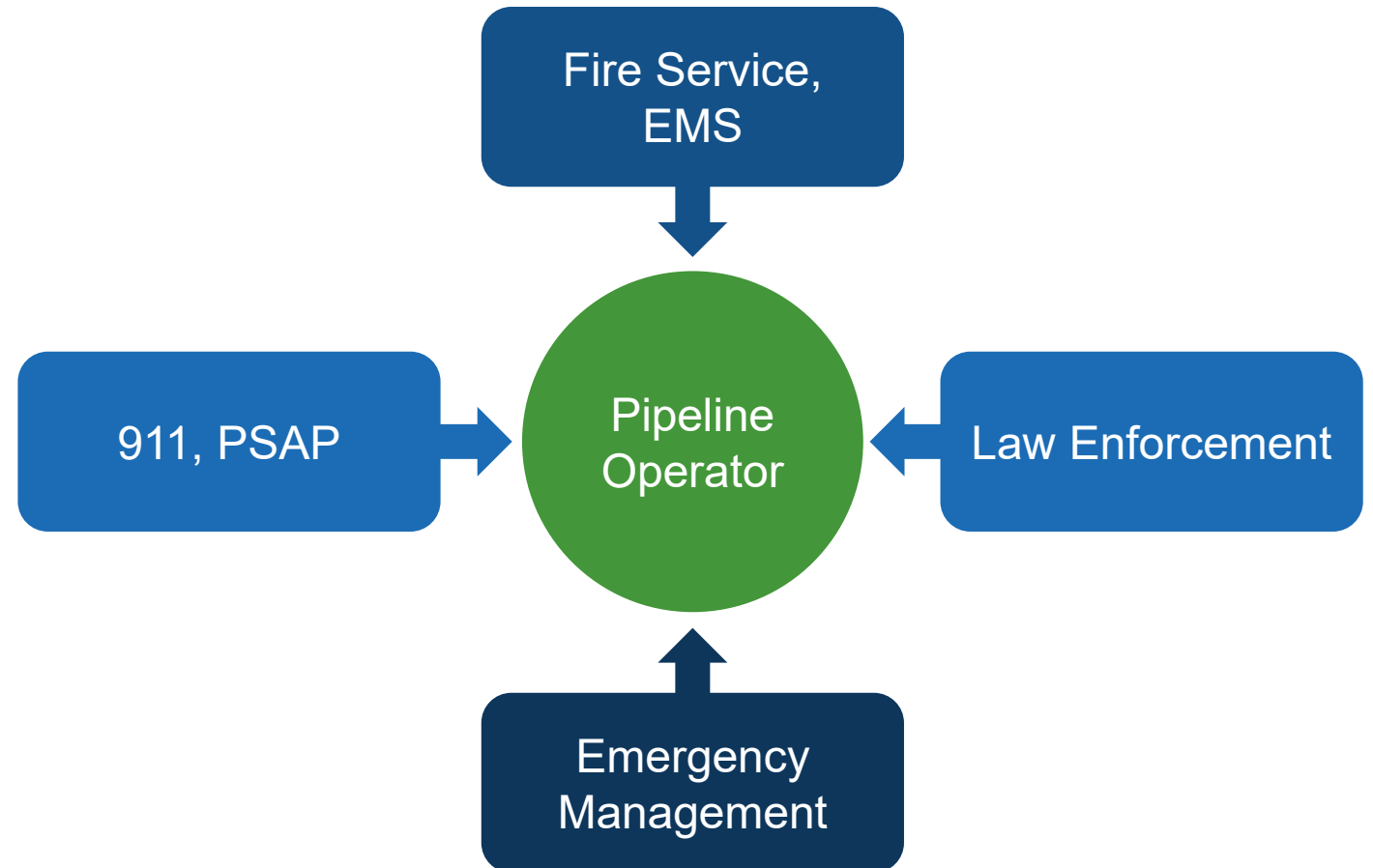


# Product Properties

PRODUCT	LEAK TYPE	VAPORS	HEALTH HAZARDS	FIRE HAZARDS
Natural Gas	Gas	Lighter than air	Extremely high concentrations may cause irritation or asphyxiation	Extremely flammable and easily ignited by heat, sparks or flames

# Incident Response Procedures

Numerous agencies will be involved with pipeline response



# Pre-Arrival Incident Response Procedures

## Pre-arrival information

- Make sure Ameren Illinois is notified immediately at time of dispatch
- Weather conditions, wind direction
- Response area - location
- Mutual aid - Fire, Police, EMS, Emergency Management



# Arrival

## Incident Response Procedures

### Arrival

- Police may be first on scene
- Consider responder safety
  - Approach uphill and upwind
  - DO NOT drive through product
  - Face rigs outward
  - Eliminate any potential ignition sources
  - Radios could be ignition sources
  - Establish incident command (29 CFR 1910.120)
  - Make sure Ameren Illinois personnel is in the command post

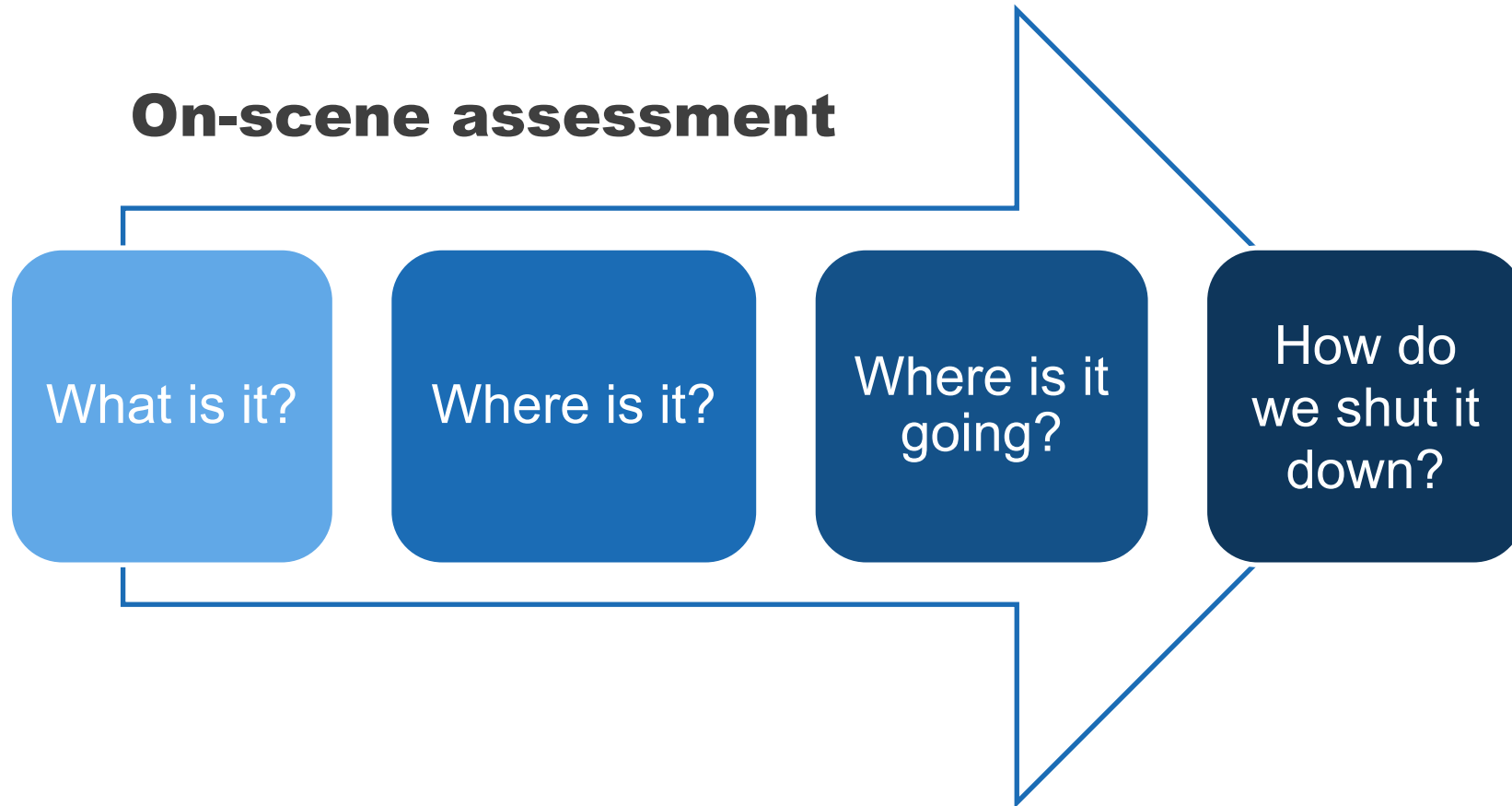
**DO NOT!**

Fight primary fires

Operate valves

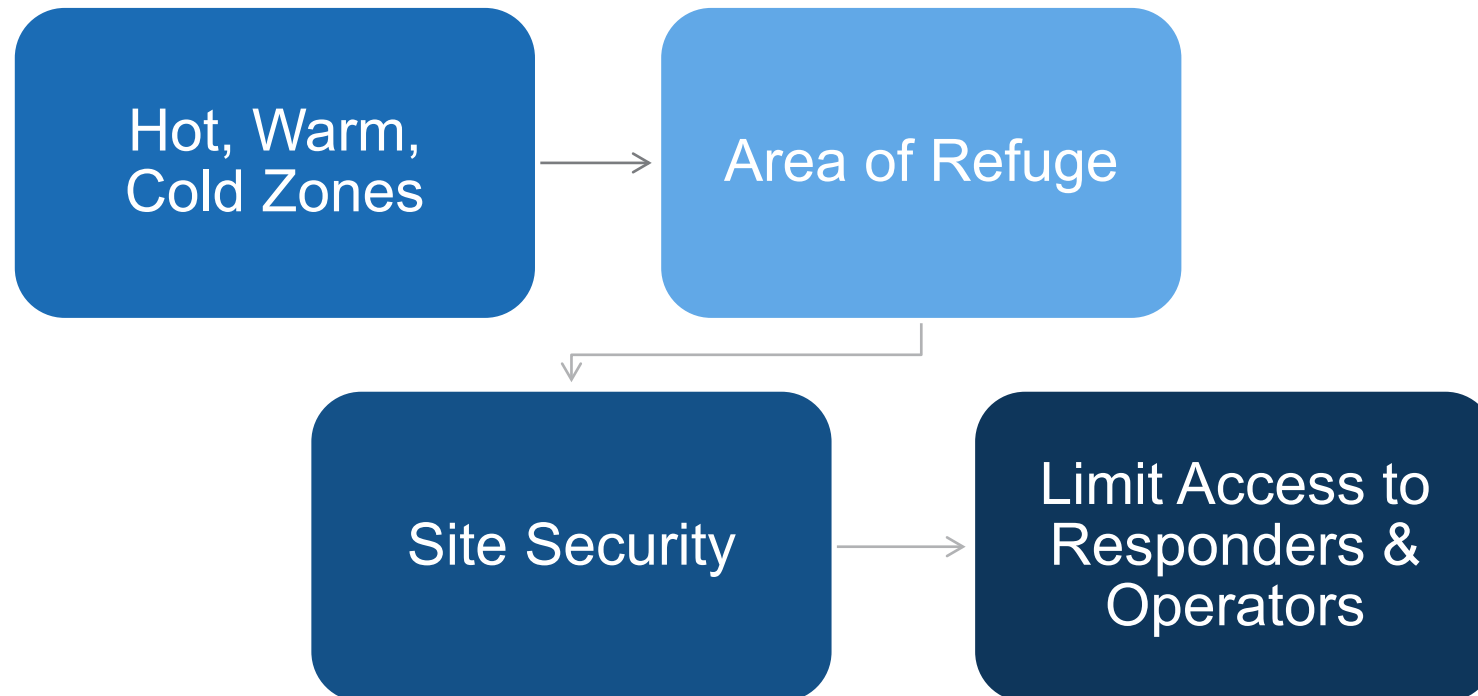


# On-Scene Incident Response Procedures



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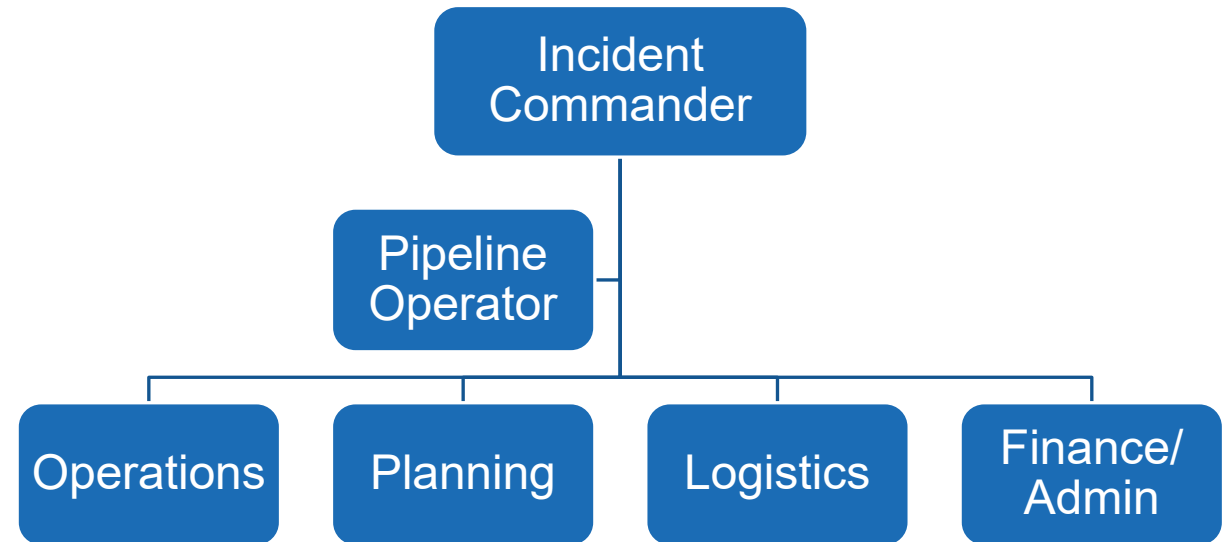
## Scene Setup



# Incident Response Procedures

## Establish unified command

- Ensure pipeline operator has been contacted by 911 PSAP
- Ameren Illinois may provide maps and specific information, ability to remotely shut down valves
- Ameren Illinois personnel are trained and operate in Incident Command System (ICS)
- ICS should be scalable/flexible



Any Questions

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