Attendance Note

Chat

If more than one person from your agency is attending with you today, please let us know in the chat how many are in the room.

Ameren ILLINOIS

Pipeline Incident Response for Emergency Responders

Contact Information

Ameren ILLINOIS

Emergency Responders Hotline

1.800.767.8048

Non-Emergency Contacts

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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.

Note: This is a general guide, and any further questions can be directed to local staff

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 & Reliability**
  - State & Federal Regulations
  - Role and Function of Pipelines
  - Pipeline Safety & Integrity
- **Pipeline Right Of Way**
  - Pipeline Right of Way & Encroachments
  - Report Damage or Suspicious Activity
- **Incident Response**
  - Leak Recognition
  - Responding to Incidents
  - Advance Preparedness

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

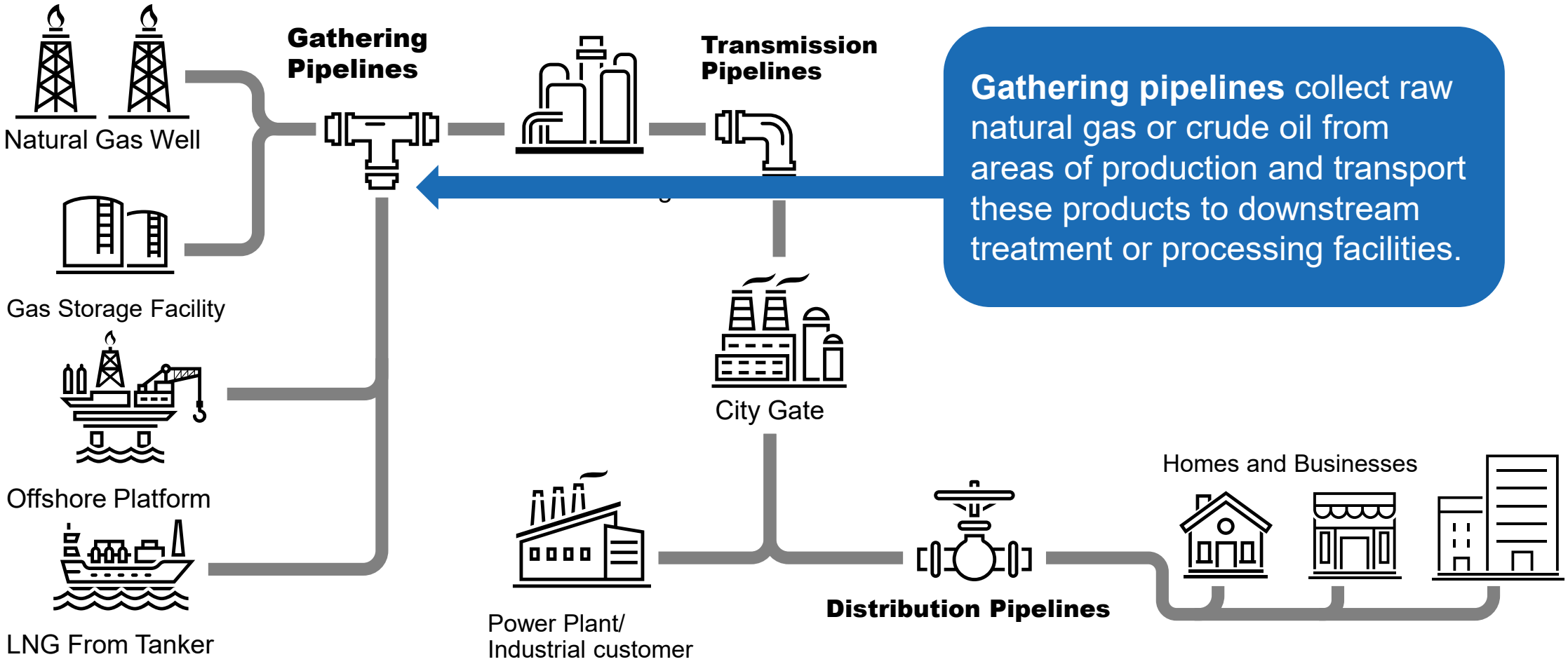
- Pipelines that cross state borders (transmission pipelines)
- Monitor compliance
- Programmatic inspections
- Incident investigation
- Direct dialogue

State Regulatory Agencies

Illinois
Illinois Commerce Commission
www.icc.illinois.gov/home/illinois-gas-pipeline-safety-program

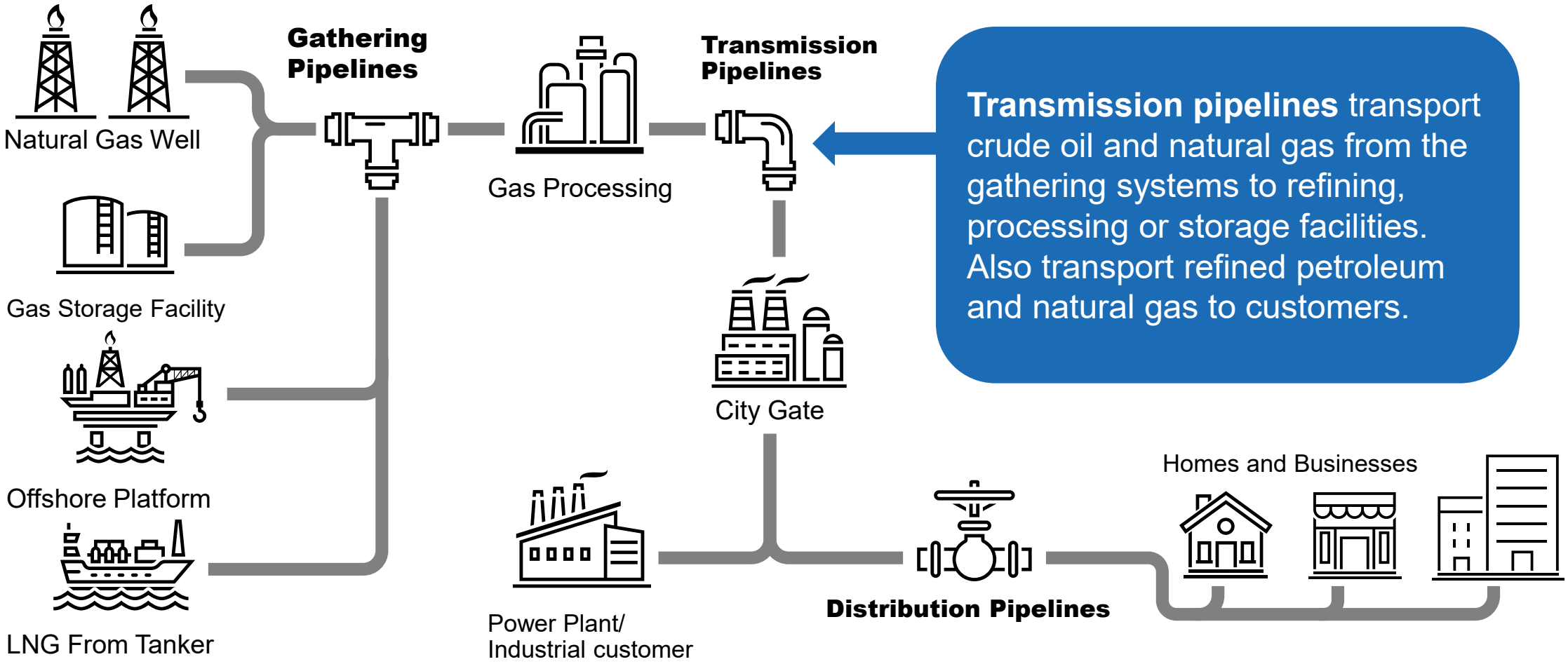
Role and Function of Pipelines

Roles and Functions of Pipelines



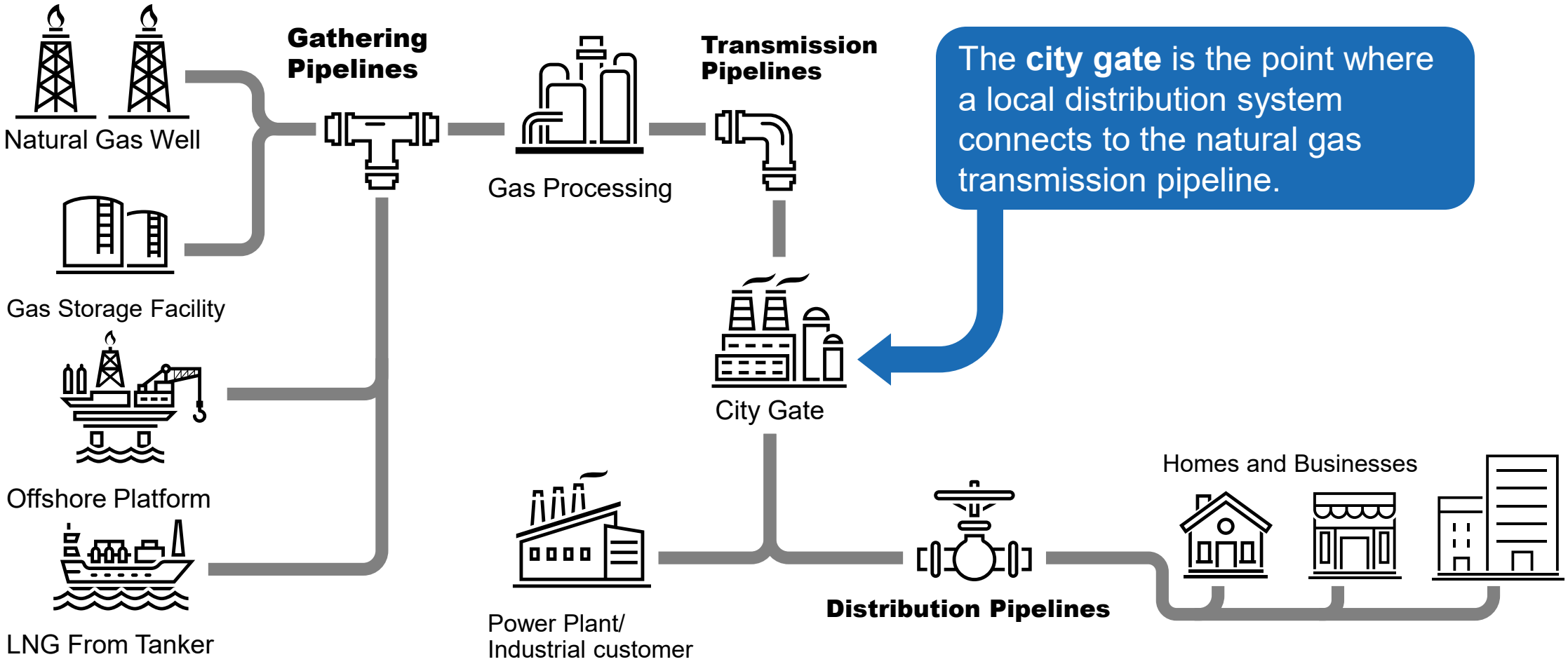
Gathering pipelines collect raw natural gas or crude oil from areas of production and transport these products to downstream treatment or processing facilities.

Roles and Functions of Pipelines

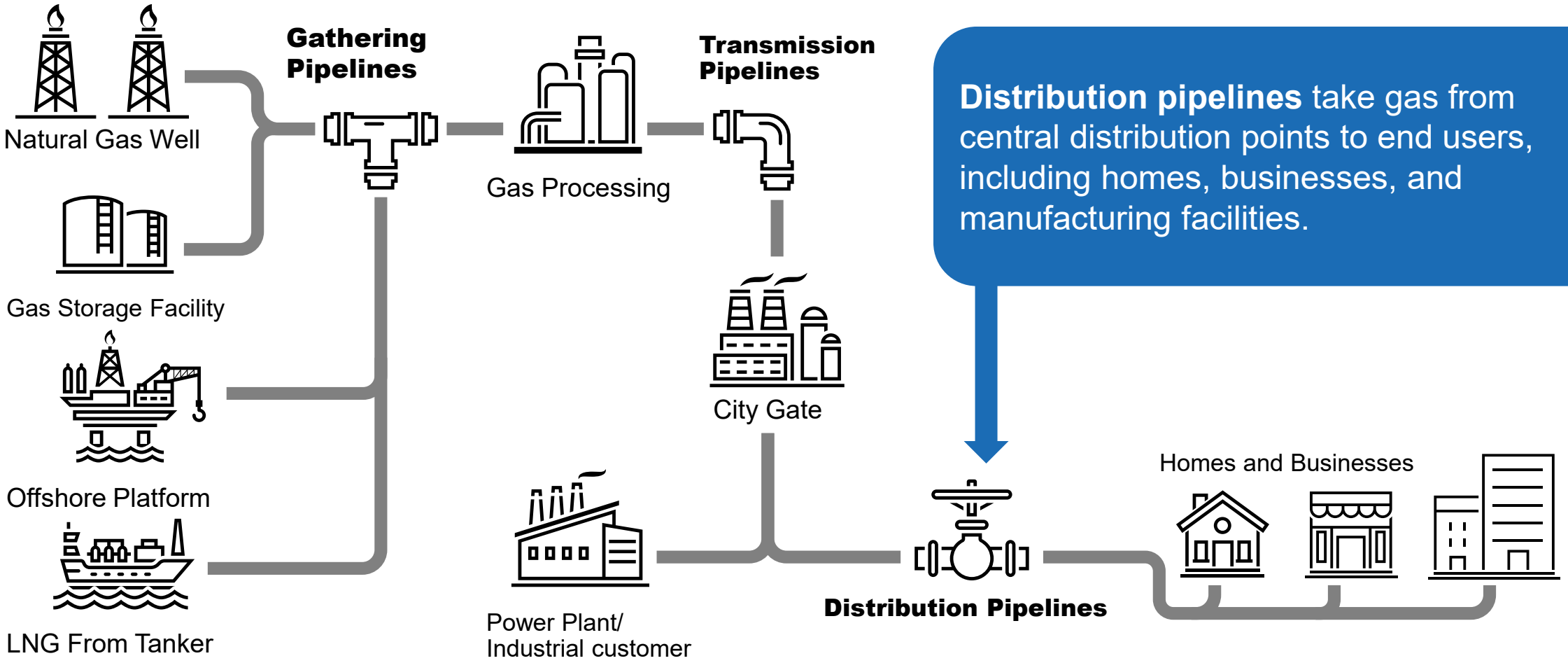


Transmission pipelines transport crude oil and natural gas from the gathering systems to refining, processing or storage facilities. Also transport refined petroleum and natural gas to customers.

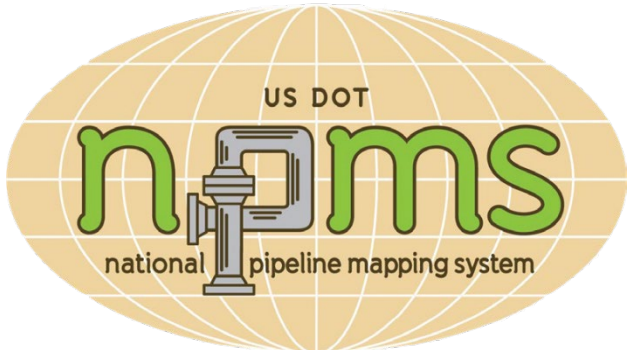
Roles and Functions of Pipelines



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

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

Aerial/Walking Patrols:

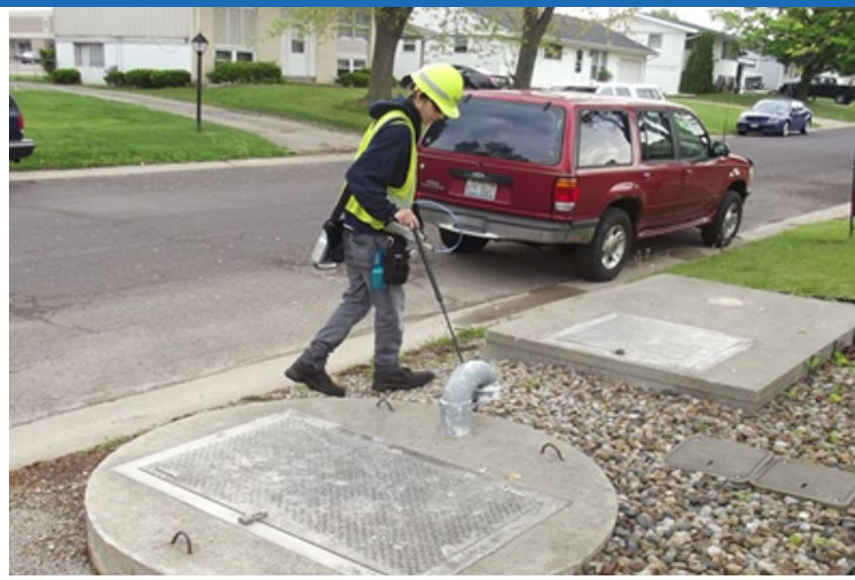
- Potential leaks
- Unlawful encroachments
- Unsafe excavations

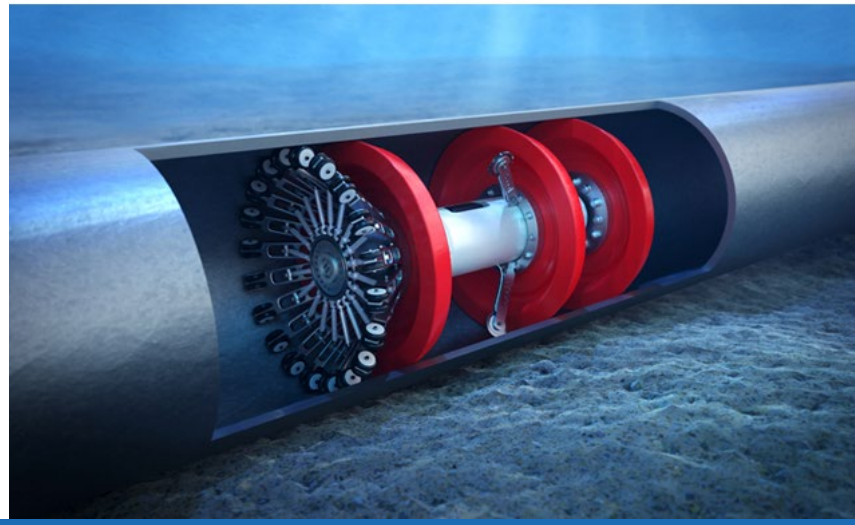
Pigging:

- 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

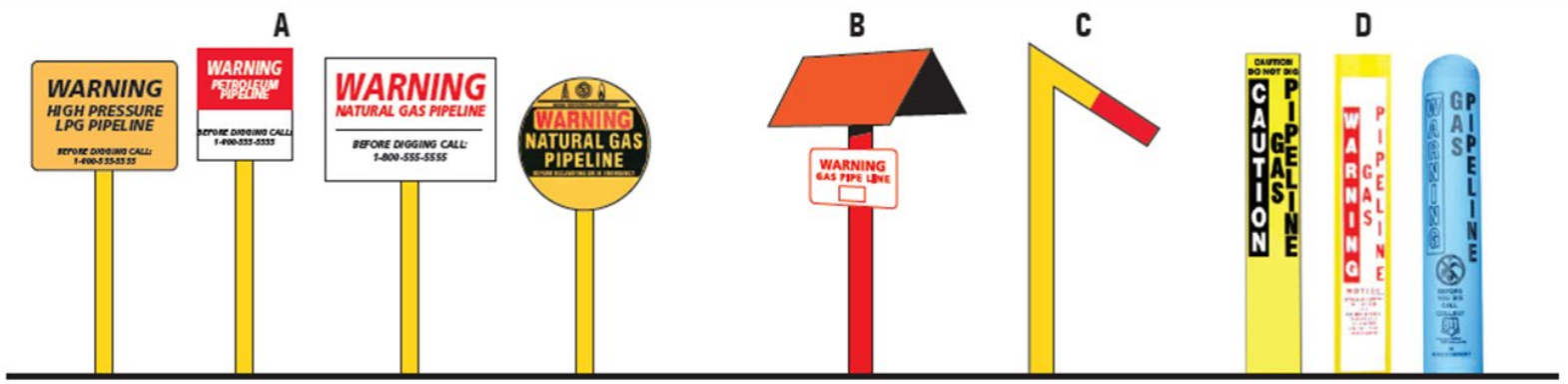
Pipeline Markers

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.

Expanded fiber-optic construction has increased the use of trenchless installation methods.

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

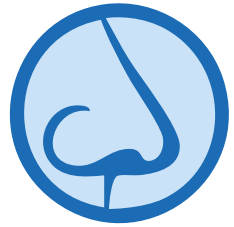
Leak Identification

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

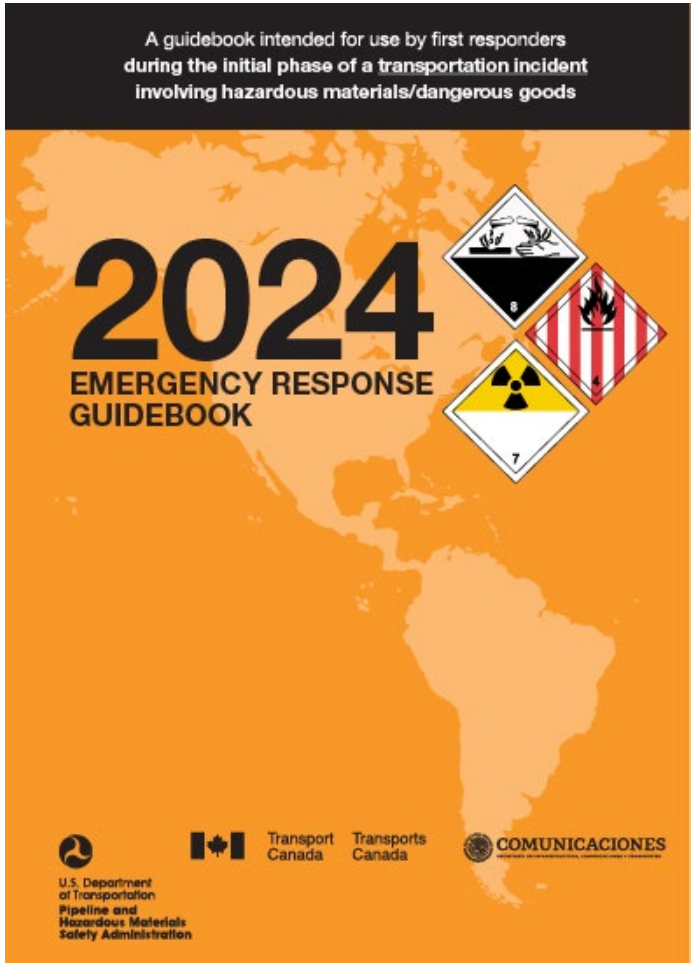


You may smell

- 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)

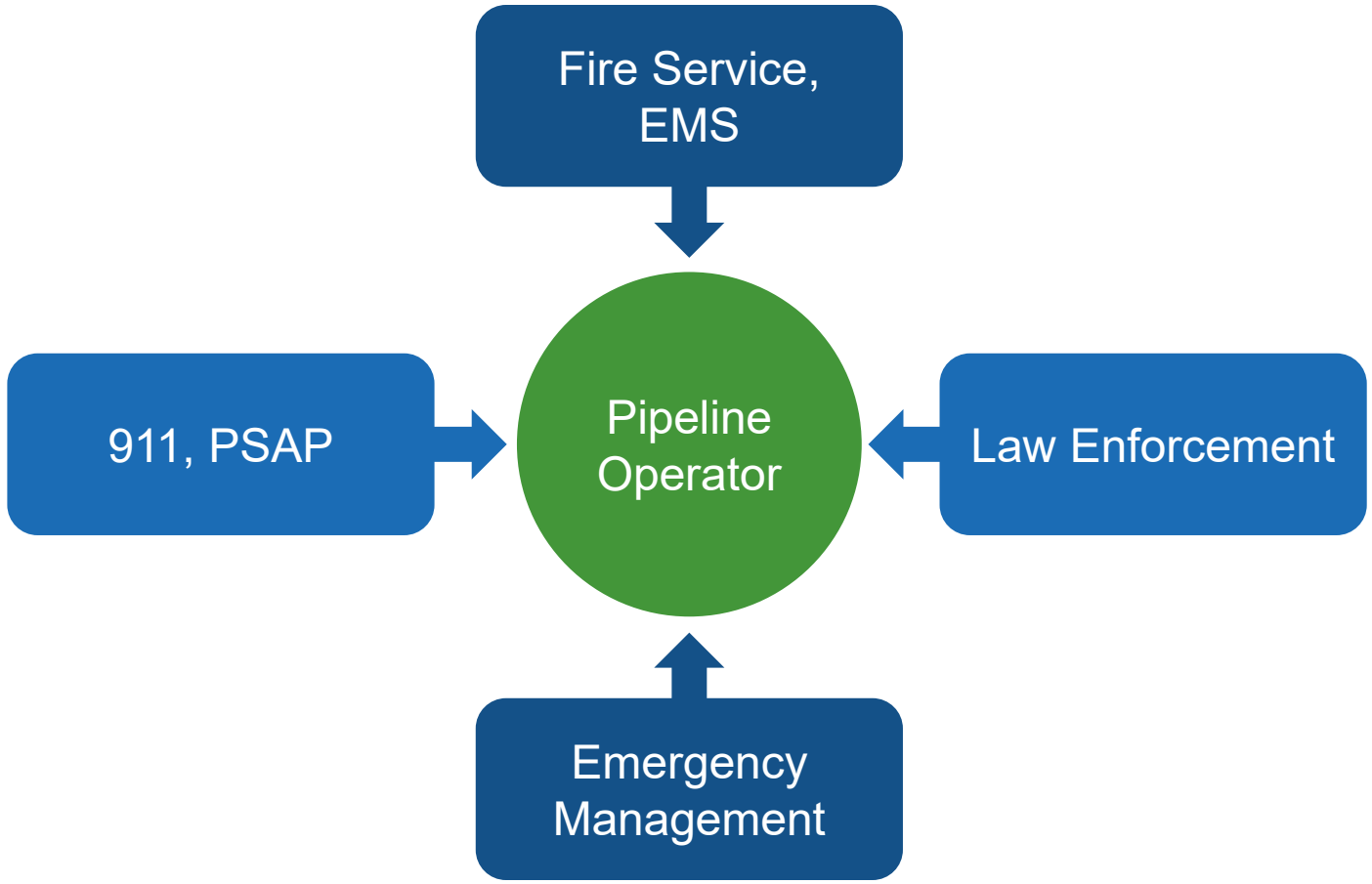


Product Properties

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 the time of dispatch
- Weather conditions, wind direction
- Response area - location
- Mutual aid - Fire, Police, EMS, Emergency Management

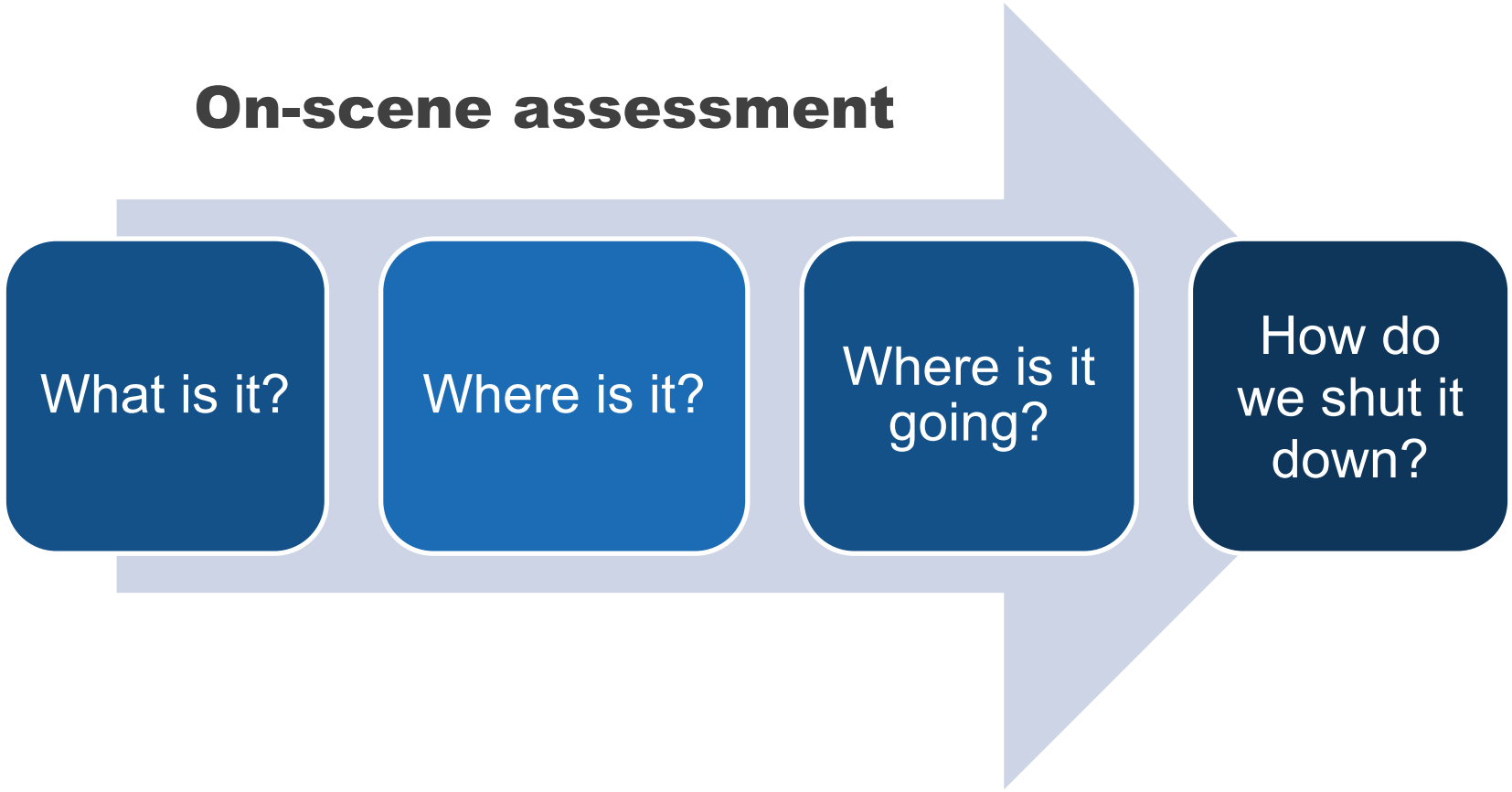
Arrival
Incident Response Procedures

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

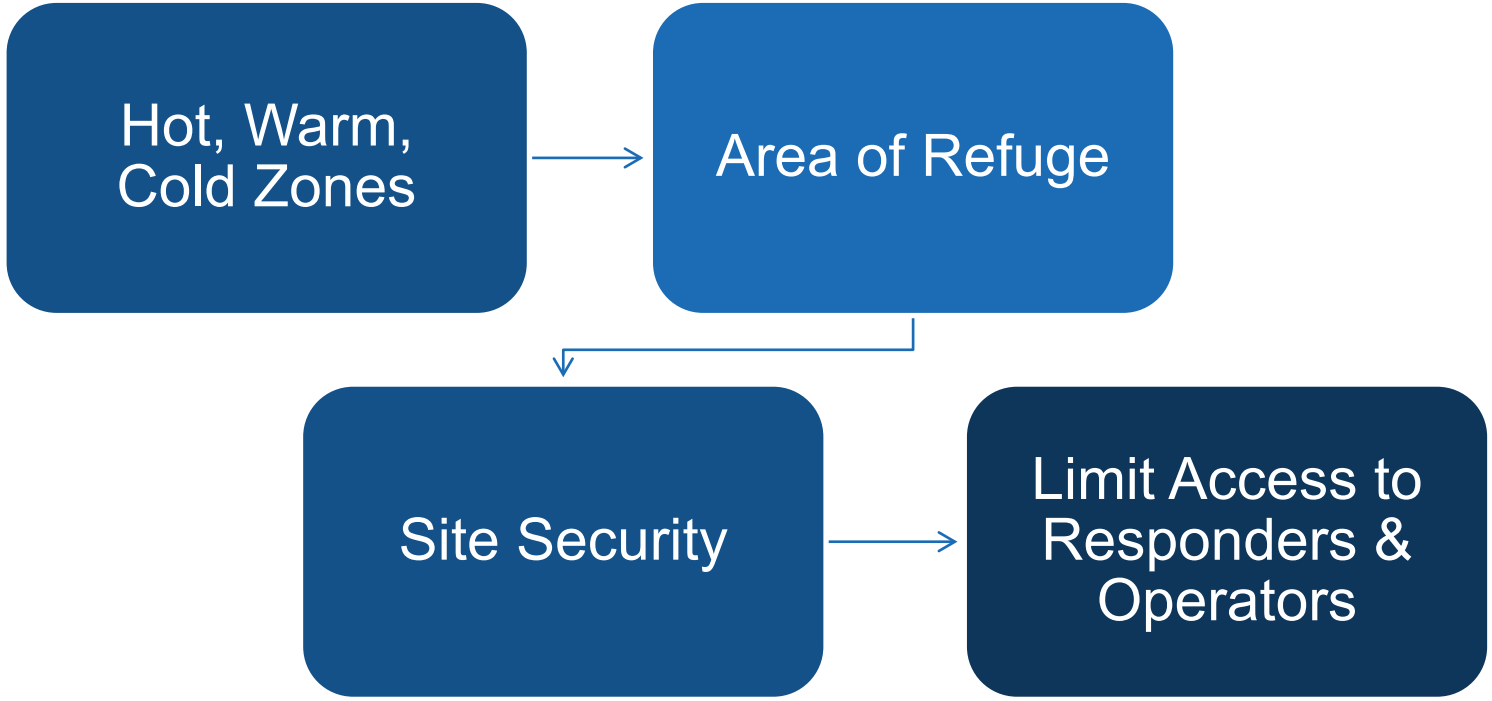
DO NOT!
Fight primary fires
Operate valves

On-Scene
Incident Response Procedures



On-Scene Incident Response Procedures

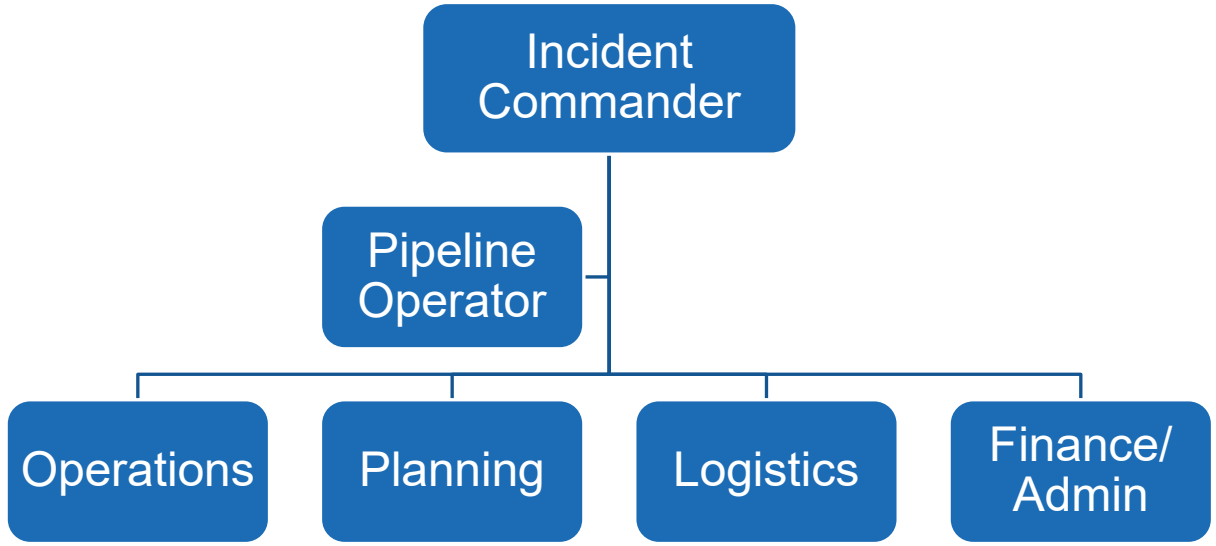
Scene Setup



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



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Any Questions

Confidential and Proprietary