



Fueling America

AGA MUTUAL ASSISTANCE OVERVIEW

Emergency Preparedness Handbook

for Natural Gas Utilities





AGA | AMERICAN GAS ASSOCIATION

Emergency Preparedness Handbook

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 79 million residential, commercial and industrial natural gas customers in the U.S., of which 94 percent — more than 74 million customers — receive their gas from AGA members. AGA is an advocate for natural gas utility companies and their customers and provides a broad range of programs and services for member natural gas pipelines, marketers, gatherers, international natural gas companies and industry associates. Today, natural gas meets one-third of the United States' energy needs.

**FIND MORE
ONLINE:**

www.AGA.org



AGA
American Gas Association

HANDBOOK

Purpose

This handbook provides a framework for collaboration in addressing potential crisis activities impacting member natural gas utilities of AGA, American Public Gas Association (APGA), MEA Energy Association, Northeast Gas Association (NGA), Southern Gas Association (SGA) and the Western Energy Institute (WEI) by outlining mutual assistance opportunities. This includes delineating roles of the lead gas association, which may be a regional gas association or AGA depending upon the extent of the impacted utilities' needs. This handbook ensures government and industry are communicating and available to support response and recovery efforts if necessary – leveraging and coordinating the unique roles, responsibilities, capabilities and assets of both.

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NATURAL GAS

Value Chain

Natural gas is an odorless, colorless, naturally-occurring hydrocarbon consisting mostly of methane (70-90 percent) and other gases. The natural gas value chain is extensive and spans from the production well-head to the consumer burner-tip. The natural gas industry and associated response, recovery and emergency preparedness activities are best distinguished by three distinct segments.

Production & Processing

Found in reservoirs deep within the earth and brought to surface through production wells. Gathering lines transport natural gas from wellhead to transmission.

*

See Appendix A for further description of each segment and associated function.

Transmission & Storage

Transmission lines transport natural gas from processing to storage facility and/or large-volume customer (e.g., local distribution system, natural gas-fired power generation, etc.).

Distribution

Distribution lines receive natural gas from the transmission line and transport the gas to the consumer (residential/commercial/industrial).

Each segment approaches emergency preparedness and response/recovery differently. For example, natural gas distribution companies generally participate in mutual assistance programs with other gas utilities and contractors, while upstream natural gas production companies have assistance programs which are more contractor-based, taking into consideration different business models and antitrust laws. Depending upon the segment of the value chain, the policies and practices may differ to best match the needs of and regulatory restrictions on the segment of interest.

This handbook focuses on natural gas distribution emergency preparedness programs and practices.



Stakeholders

AGA works closely with federal government partners and other organizations at the request of AGA members or regional natural gas associations to facilitate efficient information sharing, build situational awareness and enable effective risk-informed decision-making.

AGA

MEMBERS

- ▶ Gas Utilities
- ▶ Transmission
- ▶ Vendors

AGA STAFF

DNG-ISAC

NON-AGA

- ▶ Other Trade Associations
- ▶ Oil & Natural Gas Sector Coordinating Council
- ▶ Cross-sector
- ▶ Energy industry

GOVERNMENT

FEDERAL

- ▶ Sector Risk Management Agencies
 - Department of Homeland Security
 - Transportation Security Administration
 - Department of Energy
- ▶ U.S. Coast Guard
- ▶ Federal Energy Regulatory Commission
- ▶ Energy Information Agency
- ▶ Environmental Protection Agency

STATE

- ▶ Local Utilities Commission
- ▶ Governor

LOCAL

- ▶ Municipal or County Leadership
- ▶ Incident Commanders

*** See Appendix B for further description of each segment and associated function.**

Working with state and local governments as well as local media is generally handled by the impacted utilities and/or regional gas associations, as appropriate.



DISTRIBUTION

Structure

Natural gas distribution mutual assistance depends upon the extent of damage to the distribution system. If response/recovery can be managed using regional resources, then the natural gas association in the region in which the crisis is occurring, takes the lead in helping coordinate activities of neighboring utilities.* AGA monitors response/recovery efforts and offers a channel of communication to the Federal government, e.g., requesting waivers for Operator Qualification requirements to be instituted, as appropriate. If needs exceed the capacity of regional resources, the AGA mutual assistance program is initiated at the request of the regional association.

Source: *Guide for Communicating Emergency Response Information for Natural Gas & Hazardous Liquids Pipelines.*



AGA Mutual Assistance Program

AGA offers its members (utilities, transmission and manufacturers/suppliers/service providers) a voluntary, no-fee mutual assistance program designed to suit the wide variation of needs of its member companies across the United States and Canada.

The purpose of the AGA program is to supplement local, state and regional mutual assistance programs and is intended for unprecedented man-made or natural disasters requiring the dedication of response/recovery/restoration resources outside the limits of existing mutual aid programs.

AGA Mutual Assistance Program

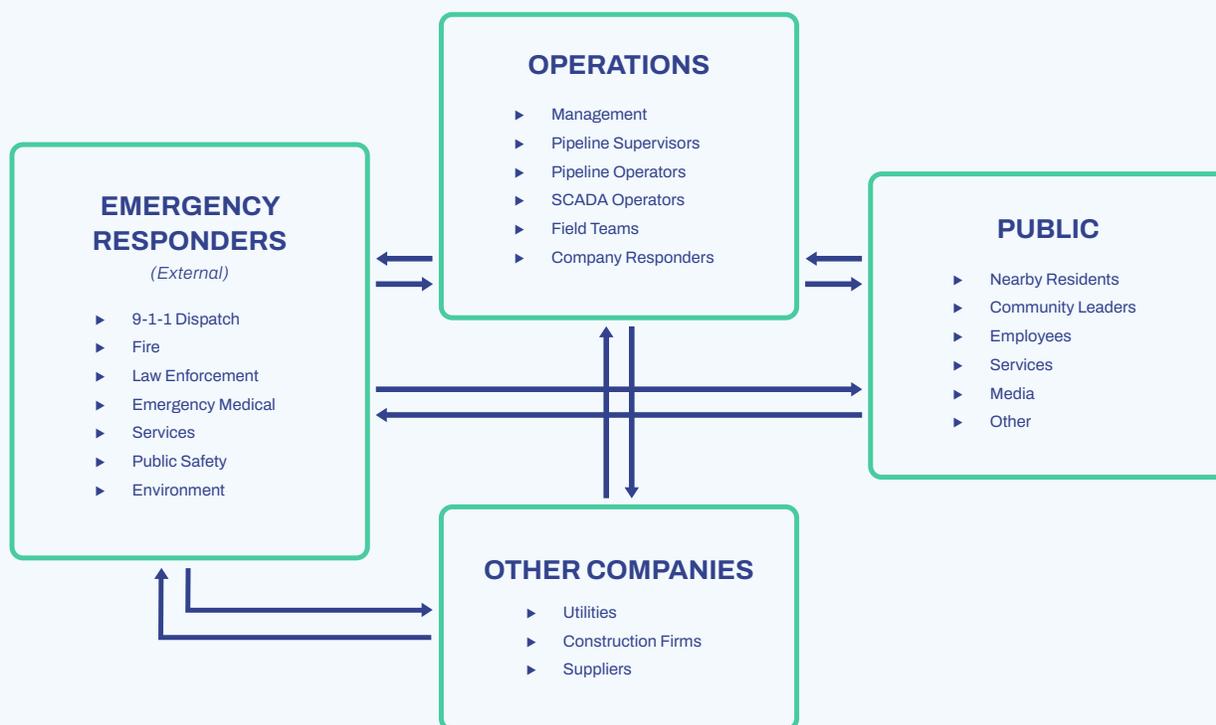
The AGA program is based on a coalition of AGA member companies, which agree to a set of baseline provisions that govern mutual assistance and agree to populate and maintain the AGA Mutual Assistance Database with company-specific emergency contact information, field capabilities and other key resources available for mutual assistance. The incorporation of the AGA Mutual Assistance Program into a company's emergency planning portfolio enhances advanced planning and effectuates response efforts in time of extenuating circumstances.



The Process for Gas

Natural gas utilities operate differently across the U.S. Mutual assistance is administered, communicated and managed non-linearly among natural gas utilities to afford flexibility.

The chart below delineates roles, organizations and communication flows for natural gas.



Utilities across our nation are increasingly integrating National Incident Management System (NIMS) into their planning and incident management structure. AGA's role in this is to support the regional associations and/or impacted utilities' communications and resource management, as appropriate, and serve as the conduit for information flow and situational awareness to and from the federal government.

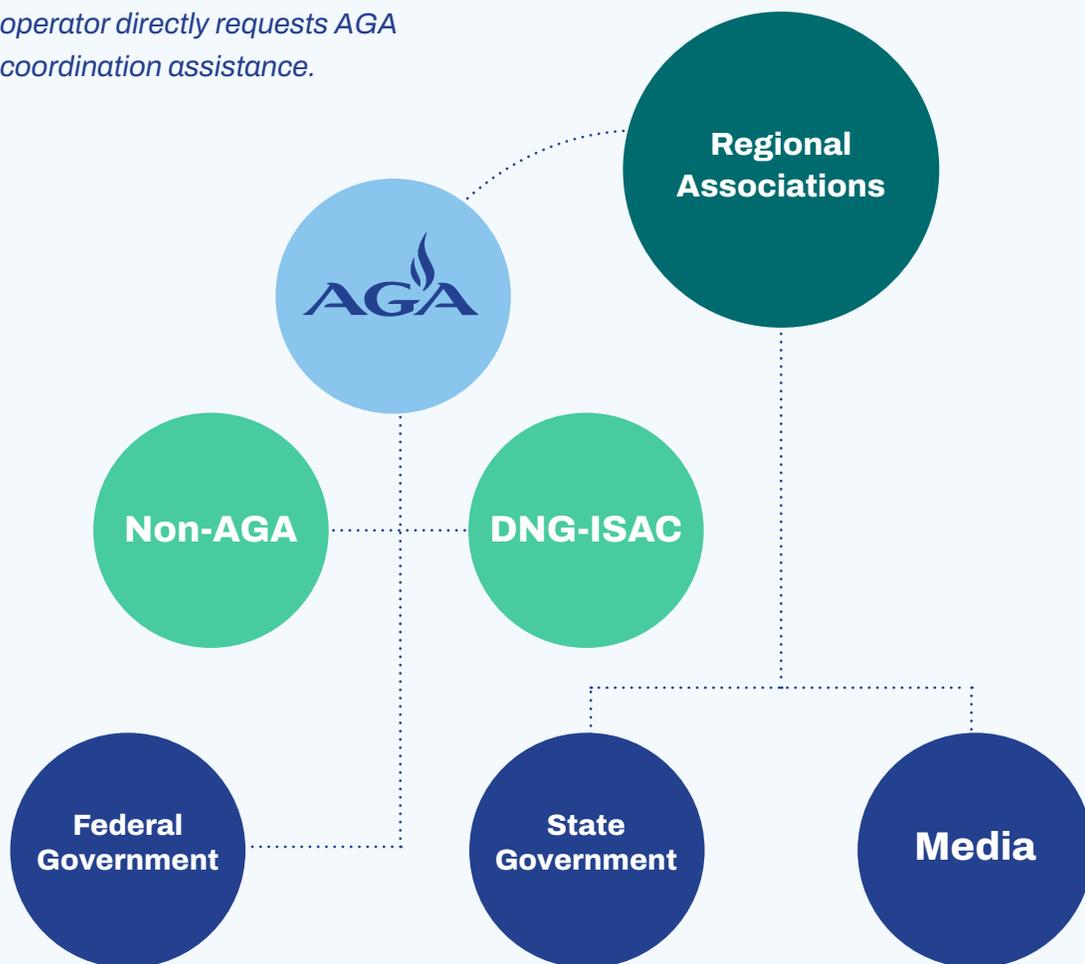
Source: *Guide for Communicating Emergency Response Information for Natural Gas & Hazardous Liquids Pipelines.*

Information Flow

WITHIN REGIONAL CAPACITY*

NOTE: The operators may also be communicating directly with their state and local Emergency Operations Centers and Media as well as with the Regional Association.

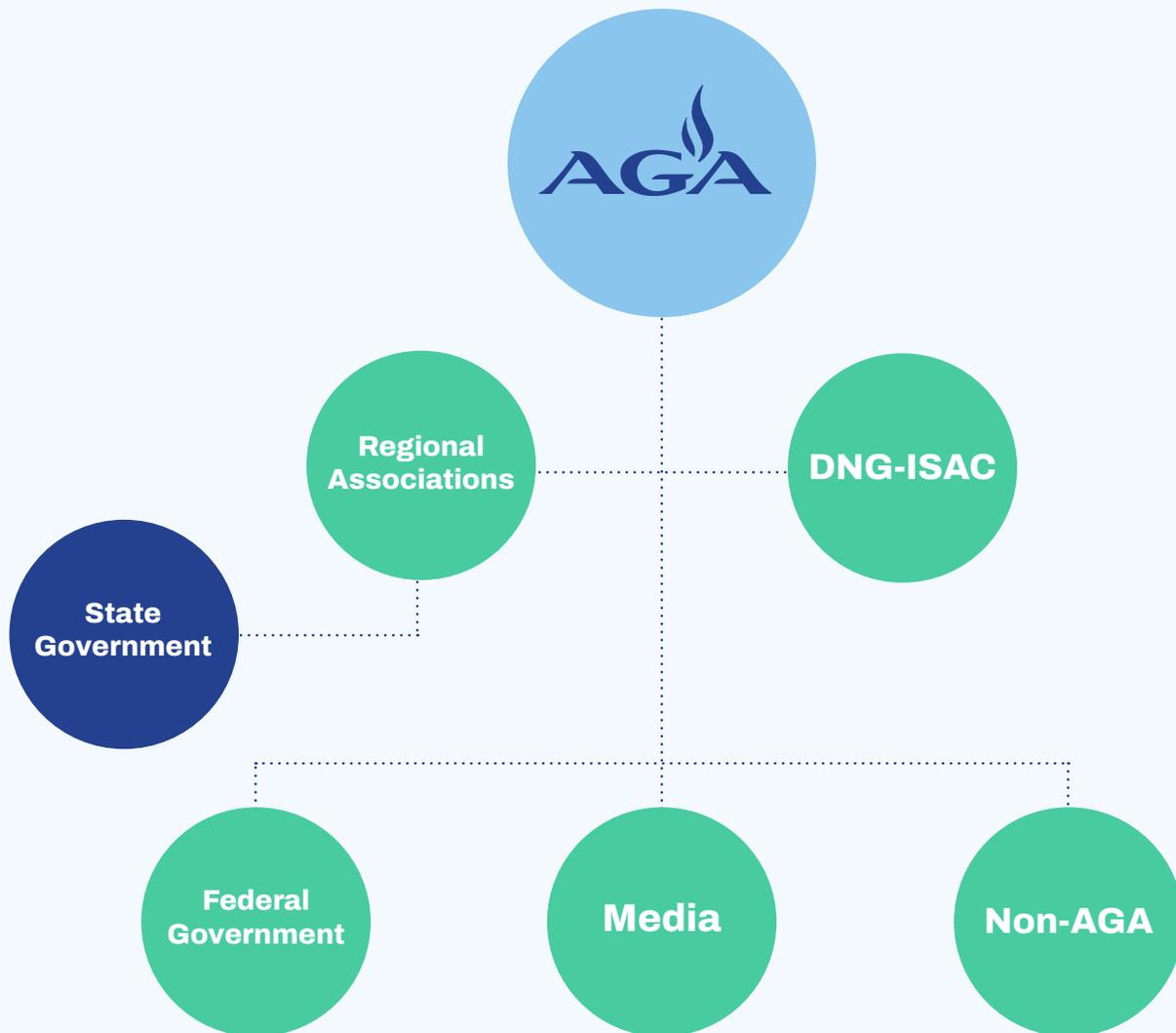
** This model is bypassed when an operator directly requests AGA coordination assistance.*



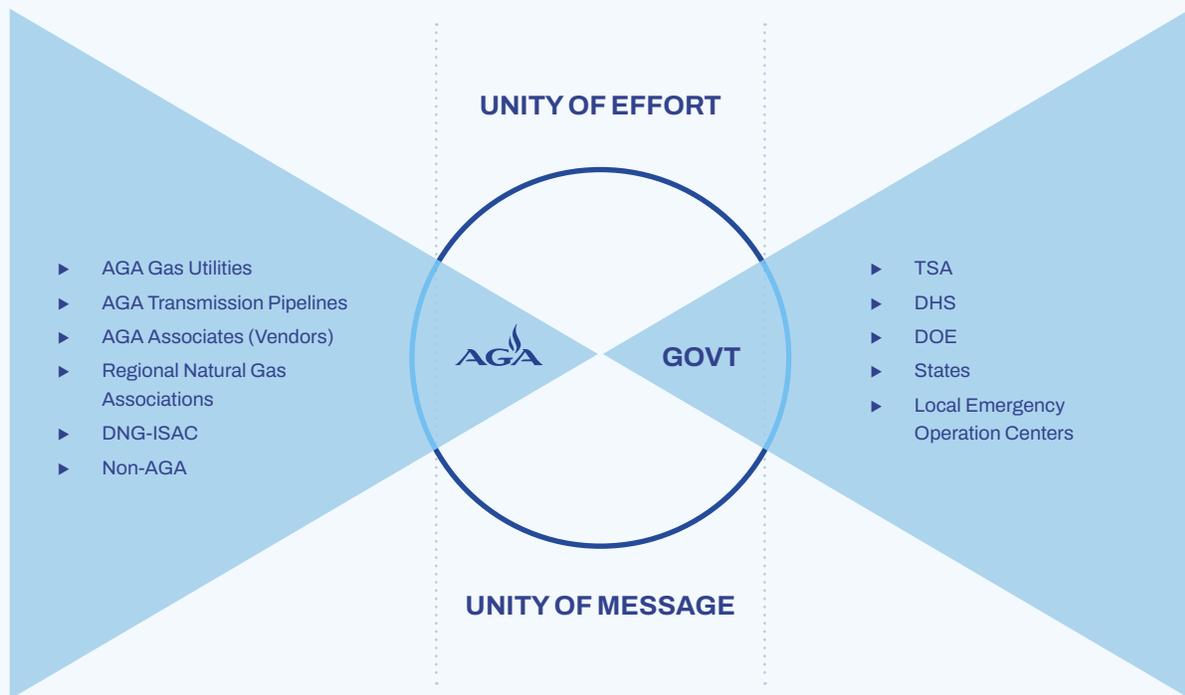
Information Flow

BEYOND REGIONAL CAPACITY

NOTE: The operators may also be communicating directly with their state and local Emergency Operations Centers and Media as well as with AGA.



Unity of Message



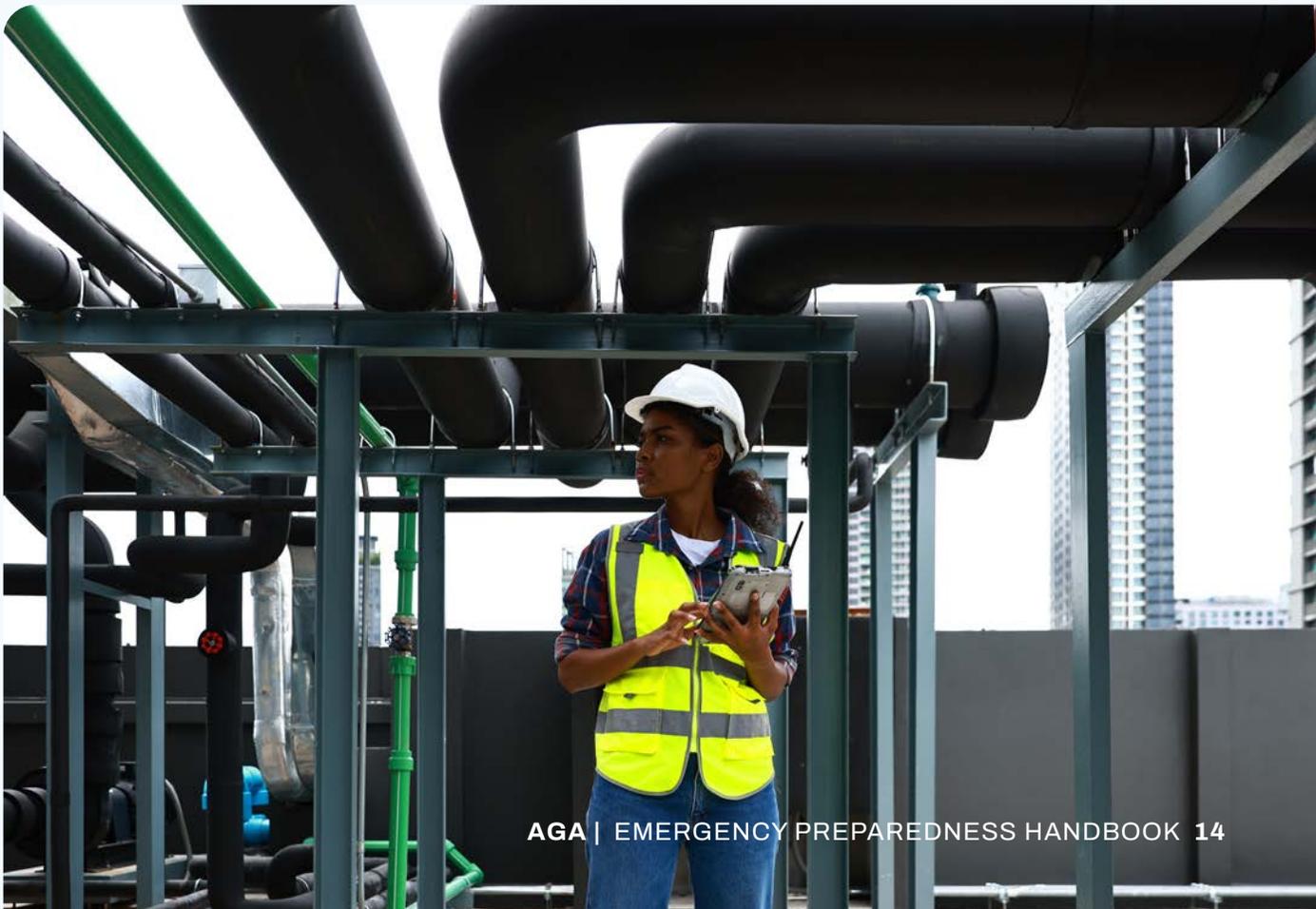
Preparedness & Alternatives

The leading priority of natural gas distribution companies is public and worker safety. This does not change in response/recovery. In general, field workers locate leaks, evacuate as necessary and stop gas flow. The value chain structure ensures natural gas delivery. Built-in redundancies and alternatives in the natural gas system minimize natural gas outages.

Natural gas can be delivered despite impacts to natural gas infrastructure. This may include delivery via over-the-road Compressed Natural Gas (CNG) or redundant pipeline feeds, where connections remain intact or may be repaired.

Cross-sector Coordination

AGA generally serves as the communication channel bridging the varying sector stakeholders impacted by significant natural gas pipeline disruption. The mutual assistance process differs across the various critical infrastructure sectors and subsectors. For example, between the natural gas and electricity subsectors, the electric process has a highly structured format, while natural gas utilities have a process that is intentionally not as linear. These differences are noted and acclimated through drills. One sector or subsector's mutual assistance program may not suit the operations and business models of another. See Appendix C for list of elements associated with gas utility preparation, response and recovery in contrast to electricity.



Appendices

APPENDIX A

**Natural Gas Value Chain -
Key Segments and Functions**

APPENDIX B

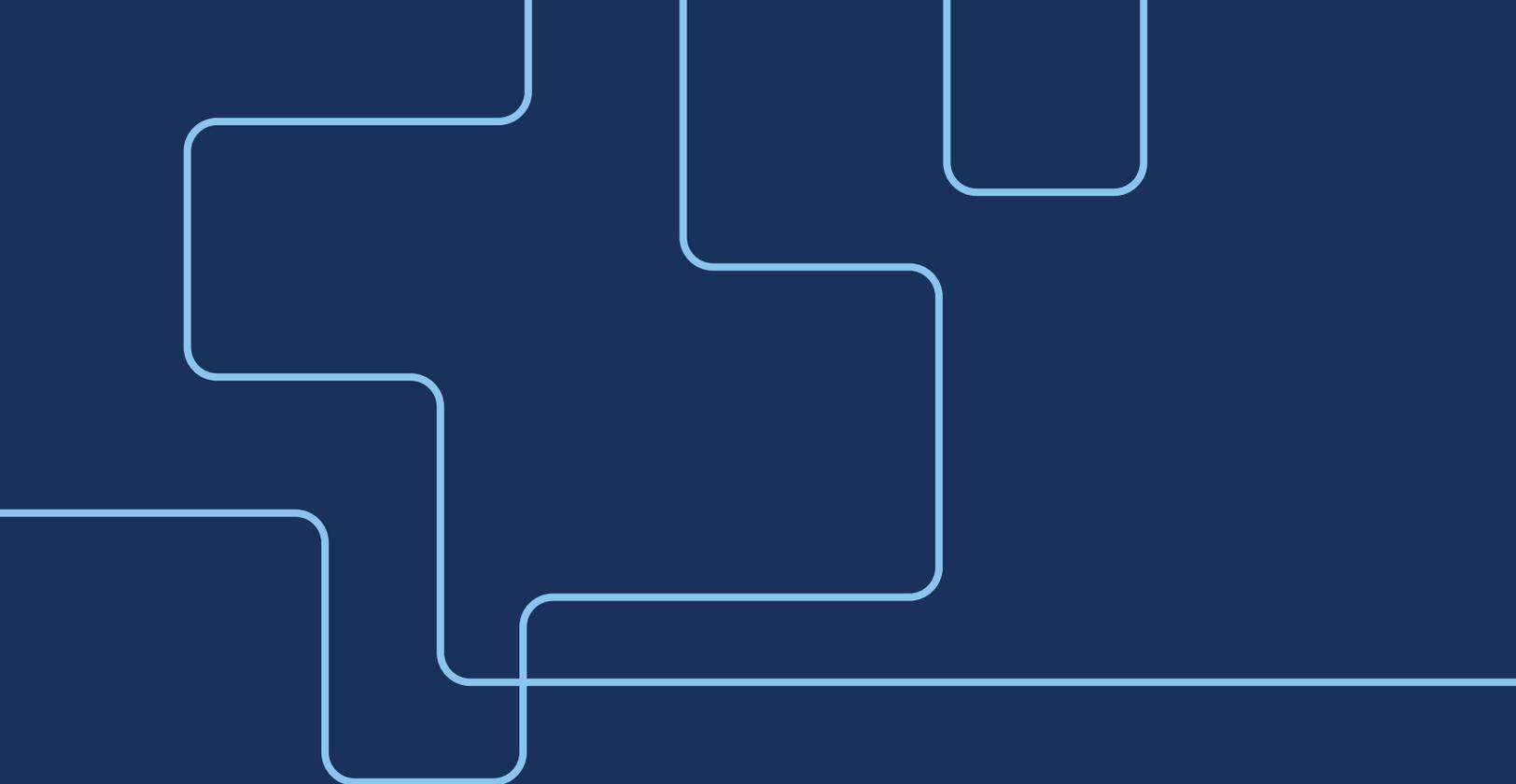
Acronyms

APPENDIX C

**Natural Gas Utility Preparation,
Response, & Recovery**

APPENDIX D

Event Scenarios



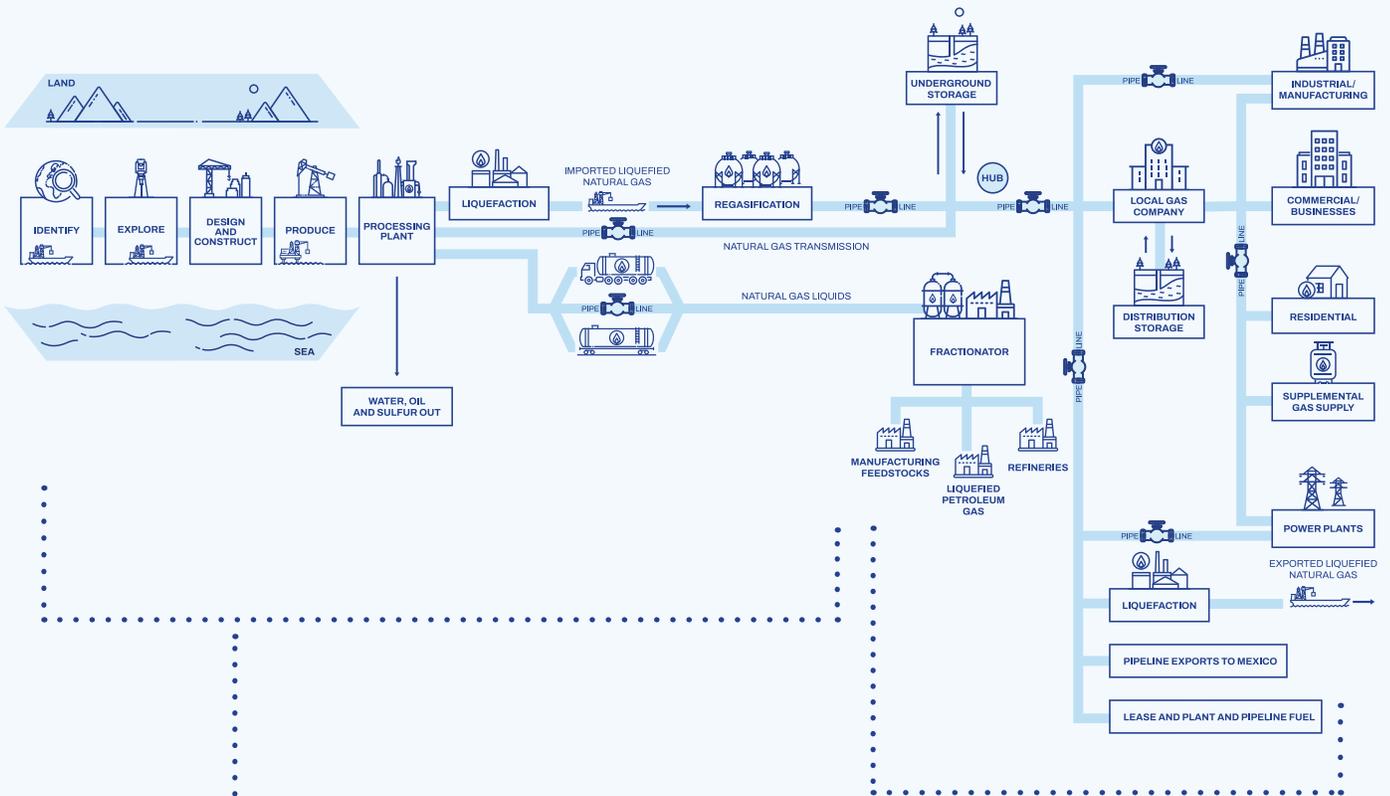
Appendix A

NATURAL GAS VALUE CHAIN - KEY SEGMENTS
AND FUNCTIONS

Operation	Segments & Functions	U.S. Infrastructure*
Production & Processing	Production: Companies explore and drill for natural gas and sell their product to marketers, local distribution companies (LDCs) or end users.	483,326 production wells <u>Citation</u>
	Gathering System: Small-diameter pipelines move natural gas from the wellhead to the natural gas processing plant or to an interconnection with a larger mainline pipeline.	111,400 miles of gathering pipelines <u>Citation</u>
	Processing: This operation extracts natural gas liquids and impurities from the natural gas stream.	510 processing plants <u>Citation</u>
Transmission & Storage	Transmission Compression: The purpose of compressor stations is to maintain the movement of natural gas along the pipeline.	1,700 compressor stations <u>Citation</u>
	Transmission Pipeline: Large-diameter, long-distance pipelines	300,464 miles of transmission lines <u>Citation</u>
	Underground Storage: Natural gas is stored in depleted oil and gas reservoirs, aquifers and salt caverns for future use.	413 underground storage facilities <u>Citation</u>
Distribution	Distribution: Natural gas utilities typically transport natural gas from delivery points located on interstate and intrastate pipelines to households and businesses through small-diameter distribution pipelines.	2.35 million miles of distribution pipelines; 1,200 LDCs <u>Citation</u>

* Estimated data available between 2017 and 2025 sourced from DOE, EIA and PHMSA (hyperlinks above)

Federal & State Distribution Segment



1

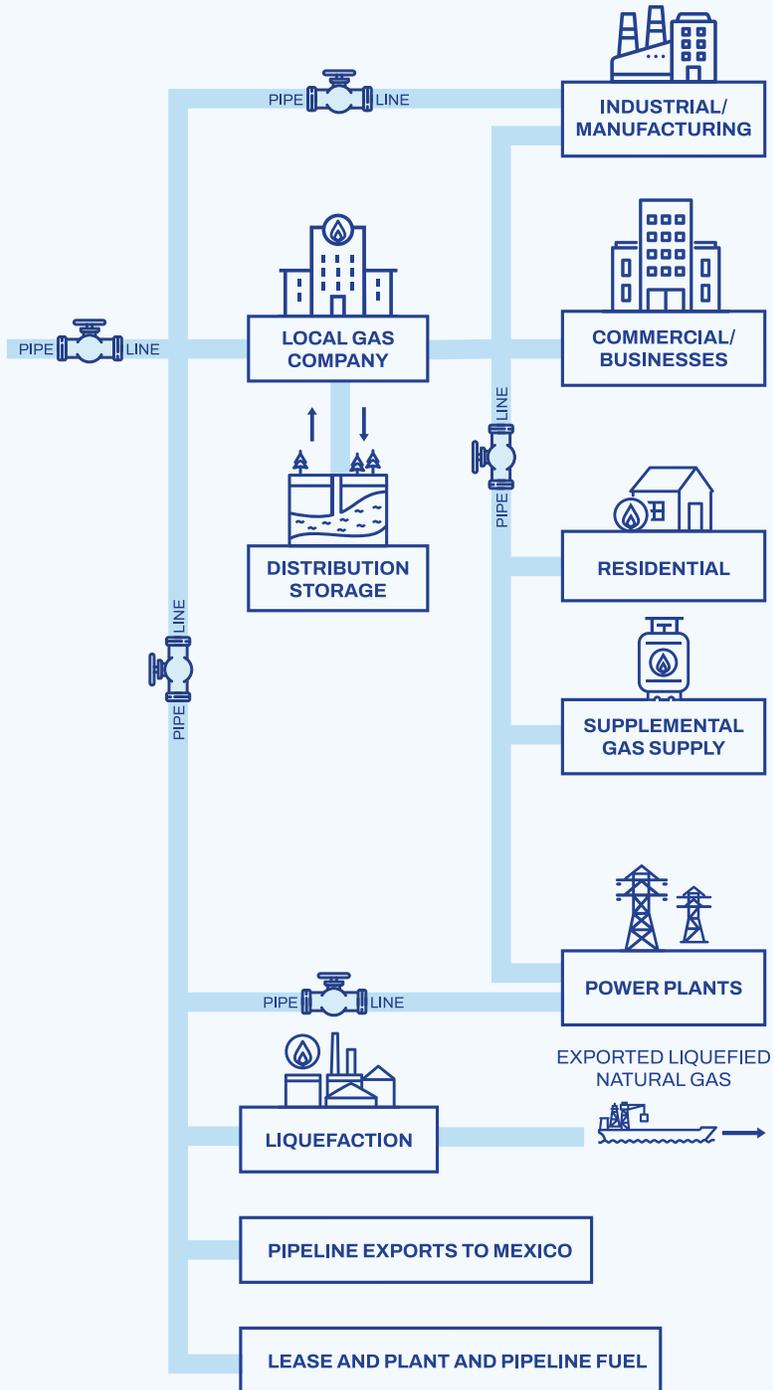
Transportation Security Admin., DHS
 Infrastructure Security Compliance Division,
 DOT Pipeline & Hazardous Materials Safety
 Admin., U.S. Coast Guard, DOE, Federal
 Energy Regulatory Commission

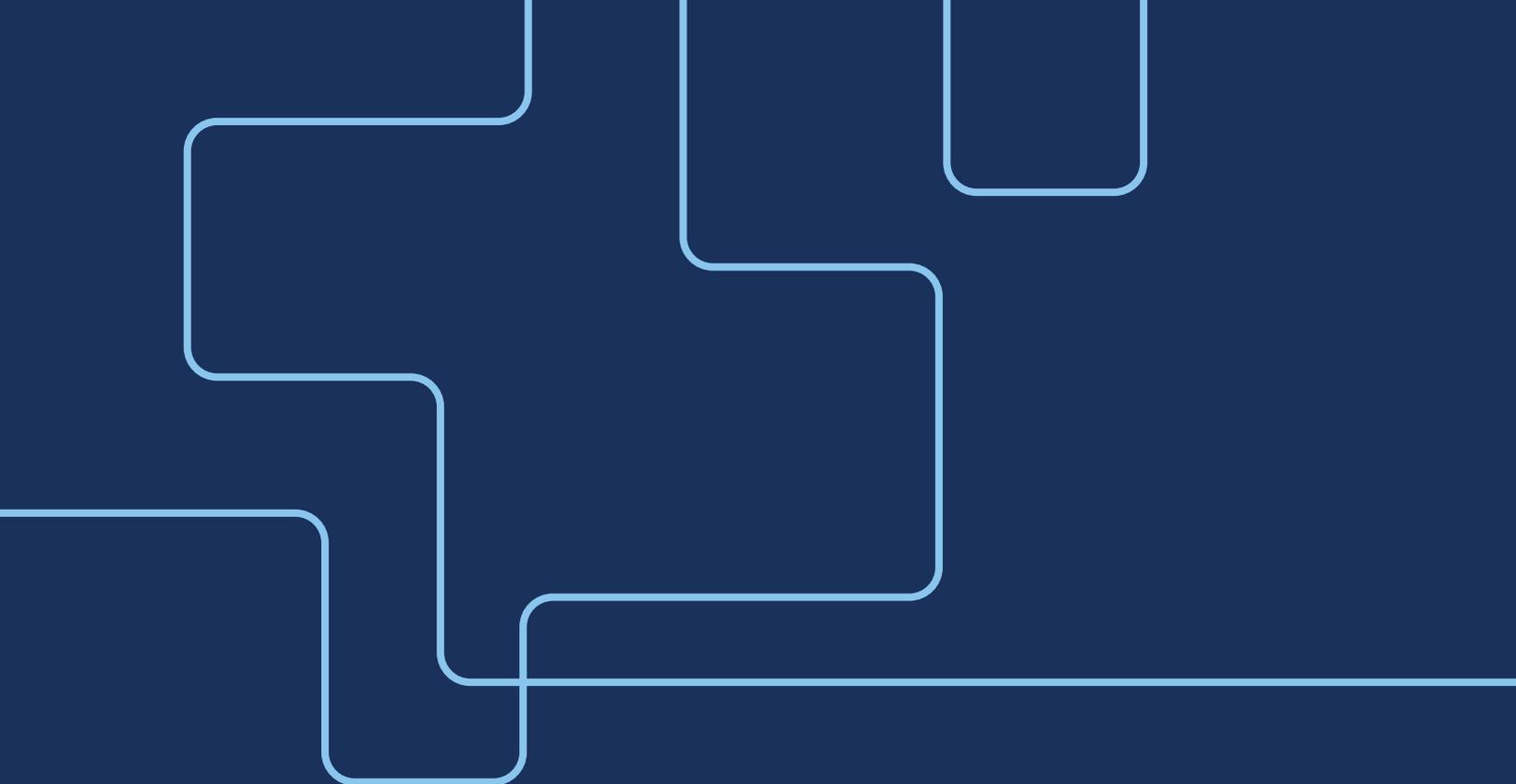
2

Transportation Security Admin.,
 DHS Infrastructure Security
 Compliance Division, DOT
 Pipeline & Hazardous Materials
 Safety Admin., DOE, U.S. Coast
 Guard, State Public Utility
 Commission

Local Distribution Segment

3



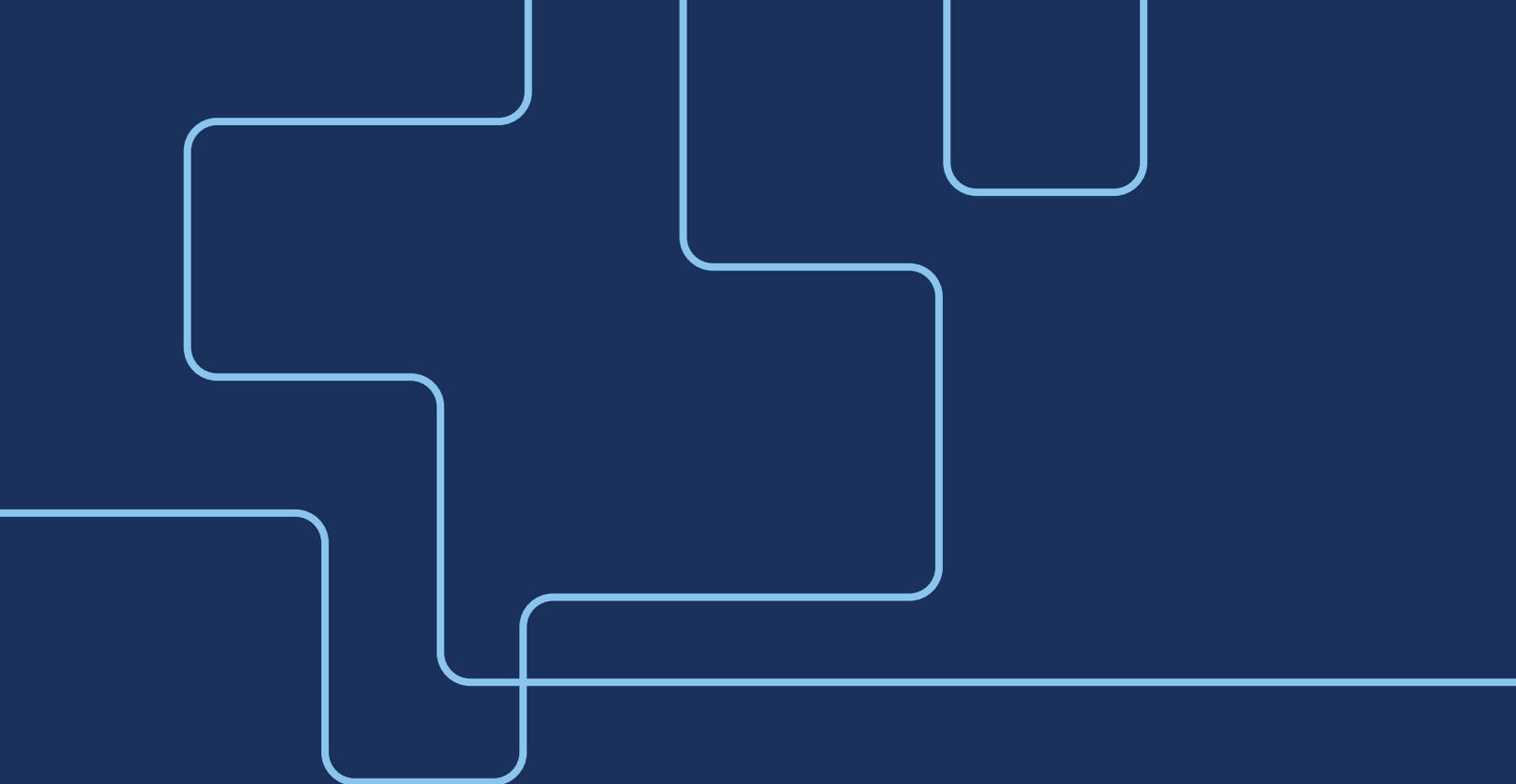


Appendix B

ACRONYMS

Acronyms

AGA	American Gas Association
APGA	American Public Gas Association
CNG	Compressed Natural Gas
DHS	Department of Homeland Security
DNG-ISAC	Downstream Natural Gas Information Sharing & Analysis Center
DOE	Department of Energy
DOT PHMSA	Department of Transportation Pipeline & Hazardous Materials Safety Administration
EIA	Energy Information Administration
EPA	Environmental Protection Agency
FERC	Federal Energy Regulatory Commission
MEA	MEA Energy Association
NGA	Northeast Gas Association
ONG SCC	Oil & Natural Gas Sector Coordinating Council
SGA	Southern Gas Association
SRMA	Sector Risk Management Agency
TSA	Transportation Security Administration
USCG	United States Coast Guard
WEI	Western Energy Institute



Appendix C

ELEMENTS ASSOCIATED WITH GAS UTILITY PREPARATION,
RESPONSE AND RECOVERY

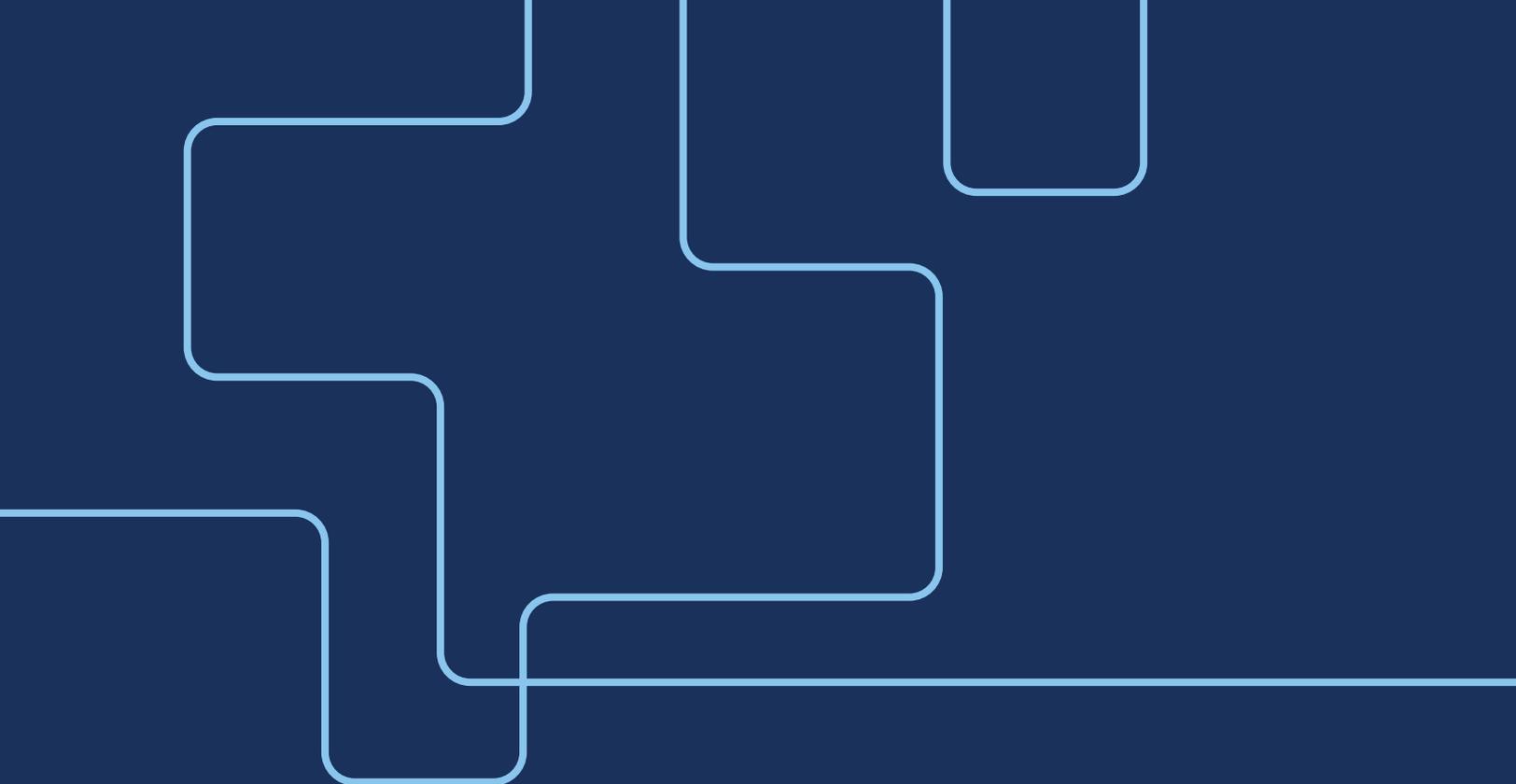
NATURAL GAS

Utility Response/ Recovery Differs from Electric

Unlike electricity systems, which are designed to shutdown under abnormal conditions, natural gas operations are designed to remain in service for the purposes of public safety and to maintain pipeline integrity.

Gas service cannot undergo rolling brownouts or blackouts. System resilience is built in up front. If the decision is made for gas service to be shutdown, bringing the system back on is a labor-intensive, multi-step process that requires running integrity tests on each repaired pipeline, visiting individual homes and businesses to shut off individual services, re-pressurizing pipelines and finally inspecting and turning on individual service meters and appliances. This final step requires that the home or business is habitable and has electric service restored. Often the pipeline has been repaired; is re-pressurized and ready to supply natural gas; but, the structures are not yet repaired or replaced.





Appendix D

EVENT SCENARIOS

Two Categories

OF EVENT TYPES

ADVANCED NOTICE EVENT

Specific events that can be anticipated (allow for preparation) and may disrupt delivery operations beyond a utility's response capabilities. These events generally include severe weather events (e.g., hurricanes, wildfires, ice storms).

NO-NOTICE EVENT

Occurs with little or no warning, disrupting delivery operations beyond a utility's response capabilities. These events can include natural disasters (e.g., tornados), cyber compromise or physical attacks.



NATURAL GAS

Response/Recovery Play-by-Play Based on Impact

IMPACT DOES NOT EXCEED REGIONAL CAPACITY

Response/recovery coordination remains at the regional level. AGA involvement is coordination between regional trades and federal entities for situational awareness and messaging.

IMPACT EXCEEDS REGIONAL CAPACITY OR AGA MEMBER GAS UTILITY SPECIFICALLY REQUESTS AGA ASSISTANCE

AGA coordinates response/recovery. Play-by-play on following pages.



Impact

DOES NOT EXCEED REGIONAL CAPACITY*

1

Impacted gas utilities assess needs

2

Impacted gas utilities contact regional gas association(s)

3

Regional gas association:

- Coordinates regional mutual aid activities
- Contacts AGA to provide situational awareness
- Supports impacted gas utilities on messaging and outreach to states and media
- Supports impacted gas utilities in requesting state government waivers
- Continuously assesses whether needs can be addressed by regional resources

4

AGA contacts federal government to provide situational awareness and advises of needs for regulatory waivers

** Select regional gas associations have pre-event correspondence with potentially impacted gas utilities*

Impact

EXCEEDS REGIONAL CAPACITY OR AGA MEMBER GAS UTILITY SPECIFICALLY REQUESTS AGA ASSISTANCE*

1

Impacted gas utilities assess needs

2

Impacted gas utilities contact regional gas association(s)

3

Regional gas association determines that needs exceed regional capacity for response/recover and contacts AGA

4

AGA implements AGA Mutual Assistance Program

- Coordinates regional mutual aid activities
- Works with regional gas association(s) for situational awareness
- Works with impacted gas utilities on messaging; outreach to states and media
- Works with impacted gas utilities to advise state government of needs for state waivers

5

AGA contacts federal government to provide situational awareness and advises of needs for regulatory waivers

6

AGA coordinates messaging outreach to Federal Government, regional associations, and media

- Regional gas associations message with state governments, as necessary

** Select regional gas associations have pre-event correspondence with potentially impacted gas utilities*

Contact Us:

AMERICAN GAS ASSOCIATION



[AGA.org](https://www.AGA.org)



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american-gas-association](https://www.linkedin.com/company/american-gas-association)



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