

How are natural gas systems operated and what regulations are in place to assure public safety?

Natural gas is distributed through an extensive system of 2.5 million miles of distribution and transmission pipelines delivering service to 177 million Americans.

All operators of natural gas pipelines are required to follow the [federal pipeline safety code](#) that falls under the enforcement of the Department of Transportation's Pipeline and Hazardous Materials Safety Administration. Each state has enforcement responsibility for pipelines within its own state. States may enforce the federal regulations and their own regulations, which are at least as stringent as the federal regulations.

Who provides oversight to ensure that pipeline operators are complying with safety regulations?

The U.S. Department of Transportation's Pipeline and Hazardous Materials Safety Administration (PHMSA) is the federal regulatory agency responsible for the oversight of pipeline safety in the United States. Learn more about PHMSA here: <http://primis.phmsa.dot.gov/comm/>.

Pipeline safety regulations apply to all pipelines in the United States. Through annual certifications and agreements, individual states have enforcement responsibility for pipelines within their own state. The state agreement with PHMSA requires a state to adopt and enforce the federal regulations. These states may enforce both the federal regulations and their own regulations, which are consistent with, and at least as strict as, the federal regulations. For a complete listing of the state regulations which go beyond the federal regulations in pipeline safety, see [this document](#) written by the National Association of Pipeline Safety Representatives.

How does the public know the industry is committed to safety?

Safety is at the very core of the work we do as an industry and natural gas utilities work tirelessly to help ensure the safety of their customers, communities and employees. The industry spends billions of dollars each year to ensure the safety and reliability of the natural gas infrastructure. Natural gas utilities are subject not only to their own stringent internal controls, but also must meet rigorous federal and state oversight. Inspections are performed regularly by state regulators to ensure that compliance is being met.

- The American Gas Association's member utilities have adopted a [Safety Culture Statement](#).
- AGA members also made a [formal commitment](#) to take additional actions beyond those required by current regulations for the purpose of enhancing safety for their customers and the public.

Are natural gas utilities doing anything to educate their customers and the public on pipeline safety issues?

Yes. All natural gas pipeline operators are required to develop and implement a pipeline safety public awareness program to educate the public in the vicinity of the pipeline, as well as state and local emergency response personnel, public officials and excavators.

Pipeline safety education methods are determined based upon the intended audience, but methods used include print materials, personal contact, telephone calls, public service announcements, community events and open houses. Pipeline operators continually review the public awareness materials and distribution methods to ensure the intended stakeholders are adequately informed and, when possible, collaborative efforts are identified.

How is pressure reduced and how and where does this typically occur in the natural gas delivery system?

There are multiple pressure variances as natural gas makes its way from a transmission pipeline to a home and therefore, multiple stages where pressure is reduced. Pressure is reduced by natural gas pressure regulators along the pipeline delivery system before the gas is delivered to the customer. For utilities, pressure regulation often begins at the city gate station where the gas is provided to the utility from a supplier.

Natural gas regulators are devices or equipment along the pipeline system to reduce the pressure of the natural gas. Generally, regulators have an internal valve which limits the volume of natural gas. By limiting the volume of natural gas, there is a natural reduction in the pressure of the natural gas.

Some natural gas regulators are located within regulator stations, and can also be located near residential meters. A regulator station generally includes several natural gas regulators that reduce the pressure of gas and allows that gas to be transported to different gas systems.

What is over-pressurization?

Over-pressurization is a term used when the pressure of the gas exceeds the pressure rating the pipeline is designed for.

How is over-pressurization prevented?

Federal regulations mandate practices and activities a gas utility must perform to safely maintain and operate their pipeline system. Safe measures for preventing over-pressurizations are included within the federal pipeline safety code.

Operators take several measures to help ensure over pressurizations do not occur. Some of these measures are listed below:

- Natural gas regulators are designed to operate within a set range of pressures, and if that range is exceeded, the natural gas regulator is designed to restrict the flow of gas. These natural gas regulators are inspected periodically to help ensure they are operating correctly.
- As an added safety measure, relief valves are installed on pipelines to vent gas to the atmosphere if necessary.

- Natural gas utilities also train and qualify their personnel on how to install equipment, maintain regulating equipment, and adhere to federal and state regulations, as well as a company's internal procedures.

Could the incident in Massachusetts be a cyber attack?

The information we have seen reported in the media is inconsistent with a cyber attack and federal investigators have stated that there doesn't appear to be "anything intentional" behind the incident.

When there is a disruption (or outage) in service, why does it take so long for the gas utility to have to restore service?

Natural gas delivery is far different from electricity in that once service has been interrupted, the process to get a customer back in service can take several days or even weeks, depending on the local conditions and the magnitude of the incident involved. Once natural gas service has been disrupted, there are actions required to have each customer's service re-instated. The utility must send a qualified service technician into each home to relight the customer's pilot. Before relighting occurs, there are a series of safety inspections which must be completed by the service technician to help ensure there is no risk involved in restoring gas service to the home or building. This must be done individually for every home/business that loses gas service.

Can the type of incident in Massachusetts happen to me and my community?

AGA considers it to be a very unusual event. Safety is at the core of the work the industry does, and natural gas utilities work tirelessly to help ensure the safety of their customers, communities and employees. Utilities are continually working to deliver natural gas safely and reliably to the communities they serve. There are federal and state code regulations that natural gas operators are required to follow in transporting natural gas to the end users.

What safety tips can AGA offer to the public?

The industry is steadfastly committed to working with local communities and has developed public awareness programs to educate local communities about pipeline safety.

Customers are the first line of defense when it comes to leak detection and it is important that whenever a person suspects a gas leak they leave the building or area immediately and call 911 or their gas utility to alert them of the issue. Customers should never assume others are calling or reporting suspected leaks.

Utilities odorize natural gas with mercaptan, which smells similar to rotten eggs, to help provide an added layer of safety for leak detection purposes.

If you are impacted by an outage, you should never try and restore your own gas service. This would be a severe safety risk for not only the customer, but the surrounding homes. Only the natural gas utility or its designated representative should ever relight gas service.

Always follow the instructions of the natural gas utility. Although it may seem inconvenient to have to evacuate your home, the gas company's priority is assuring your safety.

Natural gas utilities and pipelines also undertake a wide range of safety programs to help protect the communities they serve, including: participation in excavation damage prevention initiatives, installing above-ground markers to indicate the location of buried gas lines; performing visual inspections and leak surveys of their systems to identify potential problems; maintaining rigid requirements for qualification and inspection of construction techniques used in their systems; and supporting research and development focused on inspection technologies, pipeline integrity, corrosion prevention and construction techniques.

What actions can I take to help ensure the pipelines in my neighborhood are safe?

Customers are the first line of defense when it comes to leak detection and it is important that whenever a person suspects a gas leak they leave the building or area immediately and call 911 or their gas utility to alert them of the issue. Customers should never assume others are calling or reporting suspected leaks.

Utilities odorize natural gas with mercaptan, which smells similar to naturel gas, to help provide an added layer of safety for leak detection purposes.

It is also critical to call 811 and ensure that all those who are performing any excavation work in your neighborhood are calling at least three full days before any digging work, even if it is something as simple as planting a tree in your yard. This will allow the local utilities to come and mark the location of any underground lines so that you can avoid damaging them when you dig: <http://www.call811.com/>

Has the American Gas Association Mutual Assistance Program been activated during the incident in Massachusetts or as part of the recovery effort?

AGA's Mutual Assistance Program was established in 2006 to help facilitate response, recovery and restoration of services outside the capacity of a company following a natural or man-made disaster. AGA's program is intended to supplement regional assistance programs or where the responding company and company in need of aid are not already covered by an alternate agreement.

Regional mutual assistance was activated for the incident in Massachusetts through the Northeast Gas Association. Typically, AGA Mutual Assistance is only activated if resources are necessary above and beyond what the regional association can provide. AGA's Mutual Assistance Program was not activated in Massachusetts during the incident or the immediate aftermath.

The recovery effort, replacing pipelines that serve homes and businesses in Andover, North Andover and Lawrence, replacing appliances, making sure gas systems are up-to-code inside homes and reestablishing gas service will require a significant effort and many qualified professionals. For that effort, Columbia Gas of Massachusetts will rely upon assistance from other natural gas utilities within their parent company NiSource, local and regional contractors and other natural gas utilities through mutual assistance from the Northeast Gas Association with support from the Southern Gas Association. AGA's Mutual Assistance Program has also been requested by Columbia Gas of Massachusetts for the restoration process.