



What is natural gas?

Natural gas is an energy source that comes from microscopic plants and animals that lived millions of years ago. When these marine organisms died, they sank to the bottom of the sea and were covered by sediment. Over time, they became buried deeper in the earth and over millions of year, heat and pressure turned them into natural gas. We're now able to drill for natural gas, and we find it underground in large cracks and between layers of rocks. Natural gas is the earth's cleanest fossil fuel.

How does natural gas get to your house?

1. Drilling and processing – After natural gas is removed from the earth, it is sent to a processing plant where impurities are removed. Natural gas is odorless, which is why we add an odorant to make it easy to detect. NorthWestern Energy owns some natural gas reserves and processing plants in northern Montana. We also buy natural gas on the market.

- 2. Storage** – Demand for natural gas varies depending on the season. NorthWestern Energy purchases a significant amount of natural gas in the summer months, when prices are lower, and stores it for use during the winter heating season. Natural gas is stored in underground facilities.
- 3. Transmission system** – The transmission system moves large quantities of gas over long distances at high pressure.
- 4. Compressor station** – Compressor stations are located every 50 to 60 miles along pipelines to boost the pressure that is lost through the friction of the natural gas moving through the steel pipe.
- 5. Gate stations** – A gate station is the intersection between the transmission system and the distribution system. At the gate station, pressure is reduced and the gas enters smaller distribution pipes.
- 6. Distribution system** – Distribution pipes snake through cities and towns, bringing natural gas into neighborhoods and business areas. Regulators throughout the distribution system control the pressure in the pipes.
- 7. Service lines** – From the distribution pipes, natural gas enters service lines and flows into homes and businesses, where a regulator reduces pressure even further for safe use in appliances. A meter on each home or business measures how much natural gas is used.

Annual pipeline inspections underway

Every year, NorthWestern Energy does leak surveys on our natural gas system. This includes gas main lines, service lines and meters.

In coming months, you may see crews working throughout neighborhoods carrying what's called a sniffer. These long, hand-held wands can detect even tiny traces of natural gas, which allows us to find small leaks and get them fixed right away.

Inspectors will need to access your property to inspect your meter. If they can't reach your meter due to a locked gate or an animal in your yard, they'll come to your door and ask for access. If they can't get a hold of someone in the house, they'll send a NorthWestern Energy employee back later, so we can be sure to get a full inspection of the natural gas system.

We contract with Heath Consultants, whose employees drive cars that are clearly marked with their logo and the NorthWestern Energy logo. They also wear yellow safety vests that identify them as a NorthWestern Energy contractor. They will be following current COVID precautions. In rural areas, you may also see inspectors on ATVs.

Understanding pipeline safety

Pipeline markers

Markers, placed at all public road and railroad crossings, show the approximate location of pipelines and identify the companies that operate them. These markers indicate the pipeline content, the name of the pipeline operator and the operator's emergency phone number.

Even if the pipeline is marked, you must call 811 to have utility lines marked before digging. The pipeline may not follow a straight course between markers.

Pipeline monitoring

As a pipeline operator, we monitor the status of our pipelines seven days a week, 24 hours a day to ensure they are safe and secure. We use computers, alarms, meters and satellite technology to control and check our pipelines. The monitoring systems detect changes in pressure and flow and can activate warnings and safeguards if a leak is detected.

HCA's and IMP's

Federal pipeline safety regulations use the concept of High Consequence Areas, or HCAs, to identify specific locations and areas where an accidental release of natural gas could have the most significant adverse consequences. Once an HCA has been identified, operators devote additional focus to ensure the integrity of pipelines in that area. We have in place an Integrity Management Program, or IMP, that defines the steps and timelines for identifying HCAs, assessing the integrity of the pipelines and taking aggressive steps to mitigate the risks to people and property near HCAs.

Pipeline purpose and reliability

Pipelines are the safest way to transport energy products, including natural gas, crude oil and other fuels. The U.S. Department of Transportation's Pipeline & Hazardous Materials Safety Administration (PHMSA) regulates pipelines with the help of state partners. According to government and industry statistics, the most common cause of pipeline incidents is improper or unauthorized digging near a pipeline, which is why it's important to call 811 before you dig. Pipeline operators carefully build, maintain and monitor the integrity and security of their lines