Natural gas supplies nearly one-fourth of all the energy used in the United States. Every day, millions of cubic feet of natural gas moves through a delivery system made up of close to 2.4 million miles of underground pipelines, bringing energy to 66 million households. According to the U.S. Department of Transportation, these pipelines are the safest, most environmentally friendly and most efficient and reliable mode of transporting natural gas.

Natural gas begins its journey to your home or business from deep inside the earth. Producing wells lift the gas from its origin into low-pressure, gathering pipelines that transport it from the wellhead to a processing plant. The processing plant refines the gas making it usable for consumers. From the processing plant, the gas goes into a machine called a compressor that pushes the gas at very high pressure — up to five times the pressure of water shooting through a fire hose — through transmission pipelines. Transmission pipelines traverse the nation to distribution systems, which are the final step in delivering natural gas to customers. Local distribution companies transport natural gas from delivery points located along the transmission pipelines through pipelines to meters serving households and businesses.

In Montana, South Dakota and Nebraska, NorthWestern Energy owns and maintains 2,155 miles of intrastate transmission pipelines and 7,450 miles of distribution pipelines, serving 276,500 customers in 169 communities. Some pipelines are made of steel, covered with a protective coating, while others are made of plastic. Almost all natural gas pipelines are buried. We employ scientific methods to control corrosion on our buried lines and regularly check for leaks caused by corrosion or other environmental elements.

While pipelines have a good safety record relative to the tremendous volumes of products they carry, pipeline accidents can and sometimes do occur. For that reason, we urge everyone to become aware of pipelines in their communities, and to understand how to prevent, recognize and respond to pipeline emergencies.

The design, construction, operation, inspection and maintenance of all operating pipelines are subject to state and federal regulations and requirements. Safety is a top priority in the natural gas industry that spends more than $19 billion each year to maintain and improve the delivery system’s good safety record. Serious accidents along the system are rare, but we in the natural gas industry are dedicated to making them obsolete. The focused efforts of natural gas utilities over the past decade have led to an approximately 40 percent decline in serious pipeline incidents throughout the natural gas distribution system.
Pipeline markers

Markers show the approximate location of pipelines and identify the companies that operate them. The pipeline may not follow a straight course between markers. Pipeline operators must place markers, sometimes called right-of-way markers, at public road crossings, and railroad crossings. These markers indicate the pipeline content, the name of the pipeline operator and the operator’s emergency phone number. Please note that even if the pipeline is marked, you must contact 811 for utility line locates before digging near the marker.

Call 811 before you dig

Natural gas, electric and other utility lines are almost everywhere underground. To avoid damaging a line and to ensure your own safety, state law requires that you call the national Call Before You Dig 811 number before you dig or excavate. Technicians will come to your site within a few days and mark the location of all underground utilities including electricity, water, sewer and communications along with natural gas pipelines – for free!

Call before you dig – it’s for your safety, and it’s the law!

Steps for safe digging or excavation:

1. Mark your proposed excavation or dig area with white paint.
2. Call 811 at least two working days before you plan to work.
3. Wait until a line-locate technician marks all buried utilities lines.
4. Maintain the locate marks so you can see them throughout your project.
5. Hand dig on each side of marked utilities when you are within two feet of any marked line.

Recognizing a pipeline leak

Remember, buried pipelines carry both gases and hazardous liquids. When released, some pipeline gases, which are lighter than air, will float into the atmosphere, while other gases are heavier and will stay near the ground or in depressions. Many liquids form gaseous vapor clouds when released into the air. Be aware that all petroleum gases and liquids are flammable and, therefore, treat any pipeline leak as dangerous.

Natural gas is a colorless, odorless nontoxic substance that can be explosive in the right conditions.

NorthWestern Energy makes it easy for you to detect natural gas leaks by adding an odorant called mercaptan to the gas, giving it an unpleasant rotten-egg or skunk-like smell. If you smell this odor:

1. Leave the area immediately and warn others to do the same.
2. Avoid triggering any ignition sources such as a phones, matches, electric switches, garage-door openers, remote car alarms and door locks, electric motors, pilot lights and car and truck engines.
3. When at a safe distance:
   a. Call 911 or your local emergency number.
   b. Call NorthWestern Energy.
4. Avoid driving into or through a leak or vapor cloud.

Note that only trained first responders or technicians should attempt to extinguish a natural gas fire and turn off a natural gas valve.

Call the number on the nearest pipeline marker or your local emergency response number if you notice other signs of a natural gas leak:

• An unusual blowing or hissing sound coming from the ground.
• Dirt or dust blowing from a hole in the ground.
• Bubbling ponds.
• Dead or discolored vegetation in an otherwise green area near a pipeline right of way.
• Fire involving or close to a buried pipeline.

Pipeline monitoring

As a pipeline operator, we monitor the status of our pipelines 24 hours a day, seven days a week to ensure they are safe and secure. We use computers, alarms, meters and satellite technology to control and check on our pipelines. The monitoring systems detect changes in pressure and flow, and they activate warnings and safeguards if they detect a leak. Some pipelines even contain automatic shut-off valves that will isolate a leak.

HCAs and IMP

Federal pipeline safety regulations use the concept of High Consequence Areas (HCAs), to identify specific locales and areas where an accidental release of natural gas could have the most significant adverse consequences. Once an HCA has been identified, operators are required to devote additional focus, efforts and analysis to ensure the integrity of pipelines. NorthWestern Energy has in place an Integrity Management Program (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. It also calls for increased pipeline safety training and awareness programs.