

The Facts about Living Near a Natural Gas Transmission Compressor Station

What is a compressor station?

Compressor stations are above-ground facilities that are typically located every 50 to 100 miles along natural gas transmission pipelines. They compress natural gas to move it through the pipeline and ensure natural gas flows at sufficient volumes for reliable service at delivery points. Natural gas transmission pipelines are critical to the U.S. economy because they reliably supply natural gas to local distribution companies (including homes and businesses), manufacturers and electric generators.

Are natural gas compressor stations safe?

Yes. Natural gas transmission compressor stations must be engineered, constructed, operated and maintained in accordance with Pipeline and Hazardous Materials Safety Administration safety standards. PHMSA regulations are intended to protect the public and prevent natural gas pipeline facility accidents. PHMSA inspections are conducted during the design, construction and operation of pipelines and compressor stations.

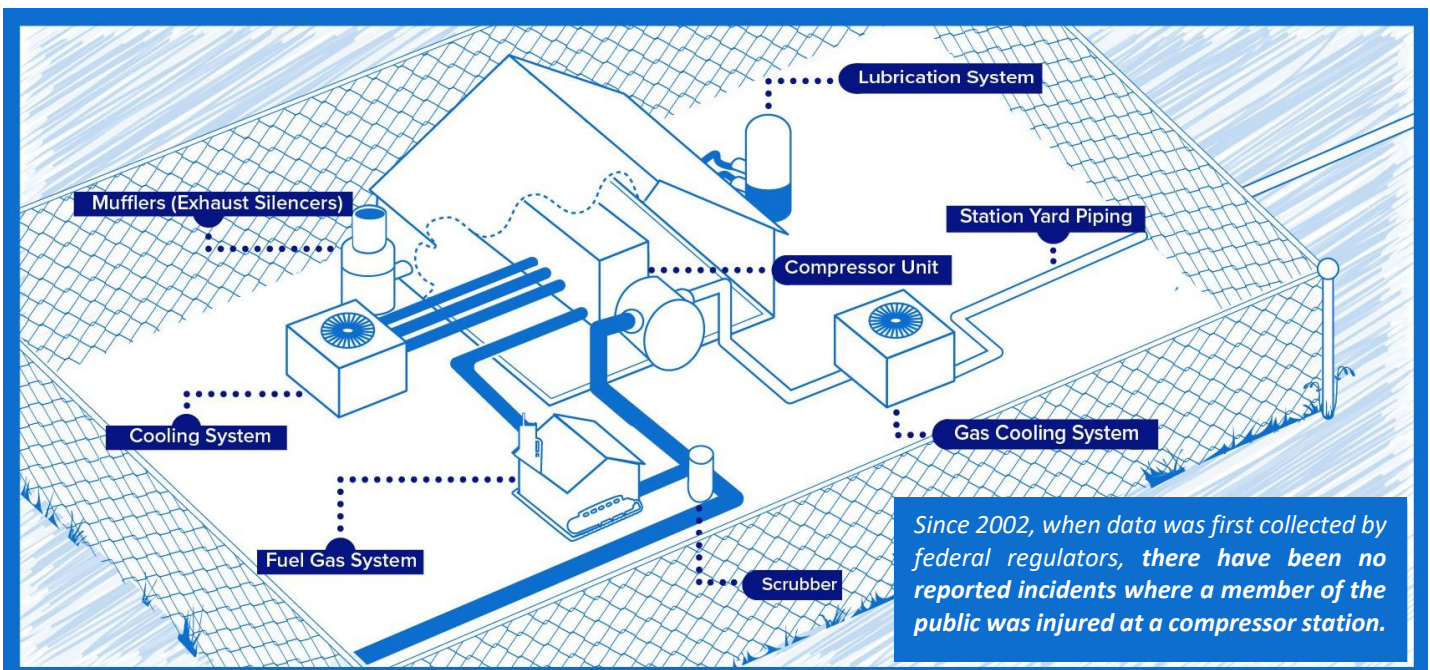
- Since 2002, when detailed data was first collected by federal regulators, there have been no reported incidents where a member of the public was injured because of a compressor station incident.
- With the help of compressor stations, 99.99% of natural gas is transmitted safely.

How stringent is the permitting process for compressor stations?

The permitting process for interstate natural gas transmission compressor stations is robust to protect the health and safety of individuals living near a compressor station. It involves multiple federal and state government agencies, providing both direct review and oversight. This ensures a detailed evaluation of the project. Natural gas compressor stations must meet all applicable federal regulations prior to and during construction, and during the operation of the facilities.

In many cases, facilities must also adhere to applicable state and local laws, which meet or exceed federal requirements. The regulatory programs are designed to ensure that:

- The station is necessary and in the public need (Federal Energy Regulatory Commission);
- The compressor station is designed and operated in a safe manner (PHMSA);
- Emissions from the compressor station will meet existing air quality standards (state agencies, U.S. Environmental Protection Agency);
- Surface and groundwater will remain protected (local agencies, EPA);
- Surface area impacts are mitigated (local agencies, EPA);
- Fish, wildlife and vegetation will be protected (U.S. Fish & Wildlife Service, FERC, U.S. Bureau of Land Management); and
- The station will adhere to noise standards (FERC).



Do compressor stations impact air quality?

There generally are no visible emissions, such as dust or smoke, during compressor operations.

The natural gas moved (and combusted) by natural gas transmission compressor stations already has been processed prior to receipt to meet the high standards suitable for homes, businesses, electric generation and industrial uses. Natural gas pipeline companies take steps to reduce losses from the pipeline system, and air emissions of transmission-quality natural gas are of predictable composition.

Because transmission compressors use gas that is already processed, there are no emissions related to hydraulic fracturing, oil and gas wells or processing at the compressor site.

Once the natural gas has reached the natural gas transmission compressor station, any sulfur compounds must conform to very low concentrations for both environmental and operational reasons. In addition, there is no documentation that attributes impact from naturally occurring radioactive material, such as radon, to natural gas transmission compressor stations. If present in the produced natural gas stream, radon decomposes quickly. By the time the gas reaches the transmission compressor station, the radon has decomposed.

Any facility found to be in violation of the Clean Air Act is subject to severe penalties, including a fine of up to \$37,500 per violation per day. Criminal prosecution is also possible. This strict enforcement regime acts as a powerful ongoing incentive for facilities to comply with the conditions of their permits and with applicable emission standards.

What is the impact of intentional natural gas releases at compressor stations?

At times, a compressor station operator may need to release transmission-quality natural gas intentionally as part of safety procedures or to conduct maintenance on the facility. This activity, often referred to as a “blowdown,” can be part of operations or planned maintenance.

Regulators consider the possibility of blowdowns during the permitting process of all newly constructed or modified transmission compressors. They require operators to limit air emissions and noise during these events.

Transmission-quality natural gas is lighter than air and dissipates quickly into the atmosphere. Through the permitting process, reviewing agencies confirm that all emissions, including emissions from planned blowdowns, meet the regulatory requirements developed to protect public health.

Are there greenhouse gas and climate change impacts from compressor stations?

The natural gas that is transported through natural gas transmission compressor stations consists primarily of methane, a known greenhouse gas. Additionally, natural gas transmission compressor stations combust natural gas as a fuel, which creates carbon dioxide, nitrous oxide and trace amounts of unburned methane. However, studies performed to date show that while leaks and losses can impact the carbon footprint of natural gas when compared with other fossil fuels, it is not enough to negate the environmental benefits of using natural gas in place of coal or oil.

Are compressor stations loud?

Compressor stations produce mechanical noise and vibrations during operation. FERC requires that noise impacts from a new compressor station, or any modification, upgrade, expansion or update to an existing compressor station must not exceed 55 dB(A) at the closest noise sensitive areas (i.e. homes, businesses, parks, churches, etc.) To put this sound level in context, a noise level of 55 dB(A) is like the noise generated by a refrigerator or normal indoor conversation.

Are odors emitted from compressor stations?

The natural gas transported through interstate natural gas transmission compressor stations is generally odorless. However, federal Department of Transportation guidelines mandate that natural gas that is delivered to end users – residential, commercial and industrial users – is scented with an odorant (usually mercaptan or mercaptan sulfide blends) to help identify potential leaks.

Are there storm water, drinking water, runoff and spill concerns with compressor stations?

Natural gas transmission compressor stations do not pose a risk to storm water and drinking water. They generally are not a source of spills because the pipelines that connect with the station transport natural gas, not oil or natural gas liquids.