

Empire North

Frequently Asked Questions



Q. Why are compressor stations needed?

A. There are three different requirements for compressor stations: production, storage, and transmission. Production stations service gas from low pressure wells to higher pressure transmission pipelines. The requirements for storage involve pumping gas both into and out of the storage field based on system requirements. Natural gas is compressed and pushed through interstate or intrastate pipelines by 200 - 1,600 psi for transmission. Over distance friction slows the gas and reduces pressure. Compressor stations are placed along the pipelines to give the gas a boost. Compressor stations are also used to convey gas from a low pressure source to a higher pressure receiver. These stations operate based on different parameters and customer pipeline requirements.

Q. How are compressor station sites determined?

A. The Federal Energy Regulatory Commission (FERC) and U.S. Department of Transportation (USDOT) have established, respectively, rigorous siting and safety requirements for interstate pipeline compressor stations. The Environmental Protection Agency (EPA), through the state environmental agencies, strictly regulates compressor station emissions. Location criteria for compressor stations are determined by a number of factors that include: 1.) stakeholder considerations; 2.) engineering design with favorable pipeline hydraulic performance; 3.) geographic suitability; 4.) environmental resource impacts; and, 5.) constructible terrain. As part of its environmental review, FERC makes the final decision as to the compressor station location generally considering these factors.

Q. How loud are interstate pipeline compressor stations?

A. FERC regulates interstate pipeline compressor stations and require that the station's noise levels do not exceed an average day-night sound level (Ldn) of 55 decibels (dBA) at the nearest noise sensitive area (NSA), e.g., residences, schools, hospitals, churches, playgrounds and camping facilities, when operating at full load. Noise surveys are conducted before and after construction to verify these federal noise levels are not exceeded. As a point of reference, the average home dishwasher is 50 dBA.

Q. How are interstate pipeline compressor stations monitored?

A. To ensure safe operations, well trained gas controllers work around the clock in a high-tech control center to monitor and control the gas as it travels through all sections of our pipeline network. Compressor stations are maintained by highly skilled and experienced pipeline personnel along our pipeline systems. Our employees operate over 100 compressor station sites around the clock – with nearly two million horsepower in the United States and over 65 years of success.

Q. Are pipeline liquids generated at the compressor station and how is this material managed?

A. Stations are equipped with filter separators and/or scrubbers that remove any natural gas liquids or solid particles that may have entered the pipeline from various interconnects and/or receipt points along the pipeline prior to the gas entering the gas compressors. Any pipeline liquids collected in these systems are managed in accordance with all regulations and transported to federal and state approved sites.



Q. What will be seen/heard when an emergency shutdown occurs?

A. In the unlikely event of an emergency shutdown, you would hear a very loud noise often compared to the sound of a jet engine or a freight train, depending on how close you were to the station. The sound will last anywhere from one to four minutes. This sound is the result of the release of pressure from the compressor station piping. You would likely see a vapor cloud discharging into the air.

Q. What types of safety systems are required?

A. A variety of safety systems and practices designed to protect the public and station employees and property are utilized. Every station greater than 1,000 HP is required to have an emergency shutdown system that stops the compressor units and isolates and vents the compressor station gas piping. Various detectors are located throughout the facility such as natural gas, flame, and smoke. During the shutdown, natural gas in the pipeline is routed past the station.

Q. What are the public safety measures in place at compressor stations?

A. Compressor stations are highly regulated facilities that must meet rigorous siting, safety and environmental standards established respectively by FERC, USDOT and the EPA. National Fuel/Empire Pipeline's compressor stations integrate a variety of safety systems and practices designed to protect the public, our employees and the environment.

Compressor stations are designed with continuous monitoring devices along with emergency shutdown systems capable of isolating the station and safely venting the gas very quickly in the unlikely event of an emergency. Since natural gas is lighter than air, natural gas rises and dissipates quickly into the atmosphere. These systems are designed and routinely tested to be reliable, which is why it is extremely rare to have compressor station incidents.

Compressor stations are also designed with emergency manual shutdown buttons strategically placed throughout the facility which can be activated by station operators. Every one of our compressor stations is operated and maintained by highly skilled, experienced personnel trained to safely maintain the station and its pipelines.