

Inside a Natural Gas Compressor Station

Natural gas is compressed and pushed through interstate pipelines by 700 to 1,600 pounds per square inch of pressure. Over distance, friction slows the gas and reduces pressure, so compressor stations are placed about 70 miles apart along the pipeline to give the gas a “boost.” These stations operate day and night, year round to push the repressurized gas through the pipelines.

Safety Systems

Compressor stations integrate a variety of safety systems and practices designed to protect the public and station employees and property. For example, every station has an emergency shutdown system that stops the compressor units and isolates and vents the compressor station gas piping.

Regulations require that compressor stations periodically test or perform maintenance on the emergency shutdown system to ensure reliability. During the shutdown, natural gas in the pipeline is routed around the station.

Personnel

All compressor stations are monitored – and some are even controlled remotely – by highly trained personnel at a centralized gas control center. Qualified, skilled and experienced personnel operate and maintain the station equipment and pipelines.

Key Components

A typical compressor station consists of yard piping and compressor unit(s), a gas or electric power source, safety systems and personnel, all working together for the safe and efficient transmission of natural gas.

Paragraph numbers below correspond with the numbers in the illustration.

1. Station Yard Piping

Station yard piping moves natural gas between the pipeline and compressor station.

2. Filter Separators / Scrubbers

Filter separators or scrubbers remove any solids or liquids from the natural gas that enters the compressor station.

3. Compressor Units

The compressor station runs compressor units sufficient to repressurize the volume of gas flowing through the pipeline.

4. Gas Cooling System

When natural gas is compressed, its pressure and temperature increase. The gas may be cooled before its return to the pipeline to protect the pipeline’s inner coating and increase its transmission efficiency.

5. Lube Oil System

Compressor units have lube oil systems to lubricate, cool and protect the moving parts.

6. Mufflers (Exhaust Silencers)

Mufflers decrease the volume level of compressor units to meet federal, state and local standards.

7. Fuel Gas System

At most stations, the compressor units are fueled by natural gas from the pipeline, though some are driven by large electric motors.

8. Backup Generators

Backup generators stand ready in case of an electrical outage.

For more information, visit www.spectraenergy.com.

