

Understanding Compressor Stations

What Is a Compressor Station?

Compressor stations assist in the transportation of natural gas from supply points to end users. As natural gas safely moves through pipelines over long distances, friction and elevation differences slow the movement of the gas and reduce pressure. Compressor stations keep the pipeline pressurized and the natural gas flowing.

Depending on terrain, compressor stations are generally installed every 50 to 70 miles along a natural gas transmission pipeline. Trained personnel operate and continuously monitor compressor stations. These facilities are located throughout the United States and play a critical role in safely and reliably transporting the energy we need to keep our lights on and our homes heated.

How Do Compressor Stations Work?

Compressor stations are typically buildings equipped with insulated walls, shielded exhaust systems and advanced fan technology to dampen sound and limit emissions. When natural gas enters a compressor station, it passes through filters to extract trace moisture that may be in the gas stream. When it is dry, the gas is directed through additional yard piping to individual compressors. When it is repressurized, the natural gas is directed back into the pipeline with full operational pressure and continues its journey to homes and businesses.

Other on-site components include backup generators, a sealed coolant system, gas metering equipment, gas filtration systems and system monitoring and safety controls.

What Are Blowdowns, and Why Are They Needed?

According to U.S. Department of Transportation regulations under CFR 192, transmission pipelines must have the means to allow natural gas to be released intentionally as part of safety procedures or to conduct maintenance. This activity, often referred to as a “blowdown,” is a controlled release of gas from the station that can be part of operations, planned maintenance or a safety measure in the case of an emergency. In the event of an emergency, regulations also stipulate that the gas be evacuated “as rapidly as practicable.”

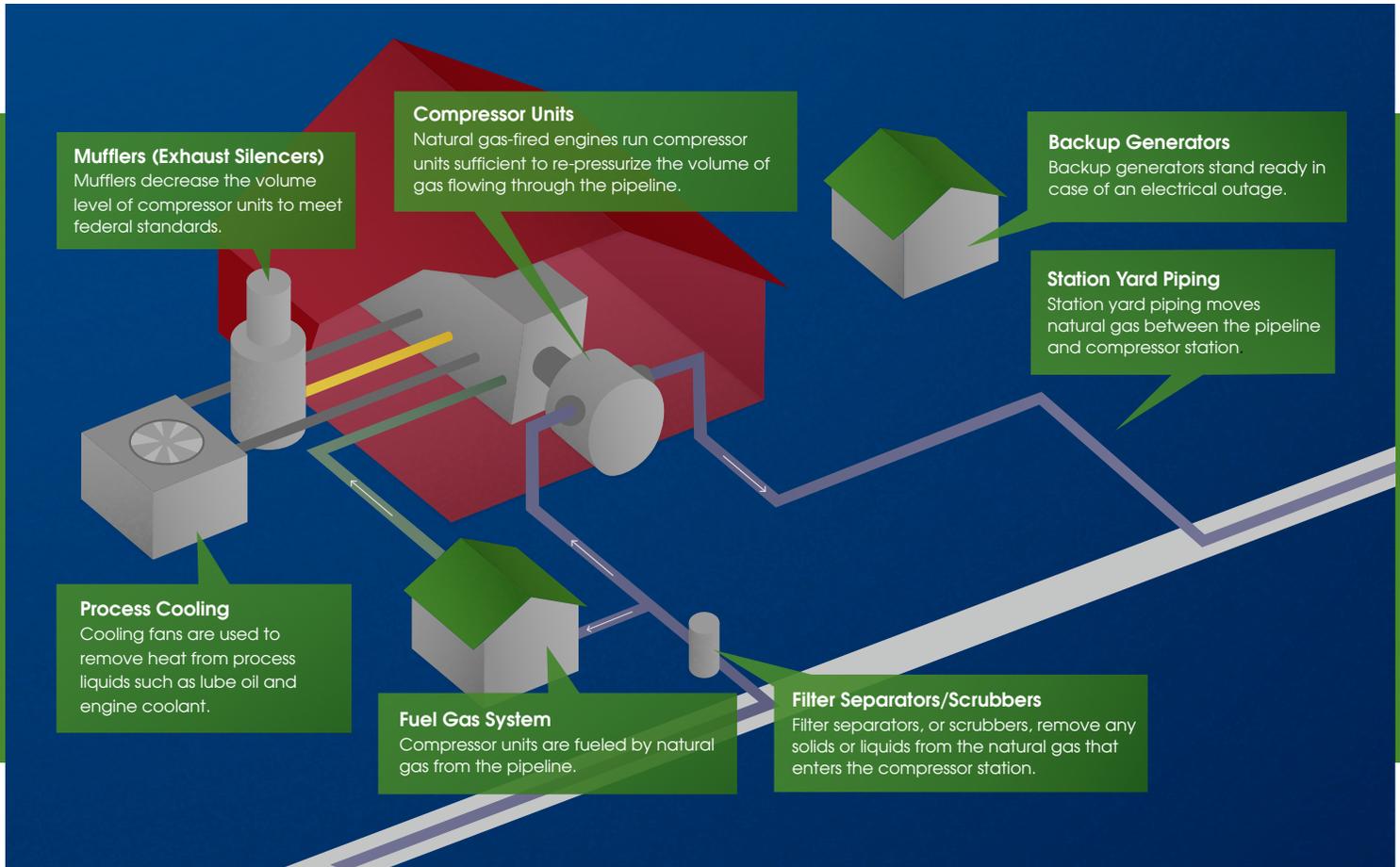
The primary substance released during a blowdown at a natural gas transmission compressor station is pipeline-quality natural gas. Natural gas is lighter than air and dissipates quickly into the atmosphere.

Through the permitting process, reviewing agencies — the Federal Energy Regulatory Commission, the U.S. Environmental Protection Agency and the Pennsylvania Department of Environmental Protection — confirm that all emissions, including emissions from planned blowdowns, meet the requirements of regulations developed to protect public health and ensure compliance with National Ambient Air Quality Standards.

Should I Be Worried About Emissions?

Compressor stations are designed with state-of-the-art technology to limit emissions and noise. Adelphia Gateway’s compressor stations will be regulated at the state and federal levels. In fact, a recent study looking at compressor stations about four times the size of the planned Adelphia Quakertown Compressor Station show emission levels (based on exposure 24 hours per day, 365 days) equivalent to everyday activities such as driving your car for 20 minutes or burning a scented candle for more than six hours. Read more about this study [here](#).

What Are the Parts of a Compressor Station?



The above diagram is for illustrative purposes only and meant to provide a general overview of how a compressor station works. Adelphia Gateway's compressor stations may be different.