



# Northern Natural Gas

BMP Transmission & Storage Partner Since 2016

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## Background

Northern Natural Gas is a subsidiary of Berkshire Hathaway Energy based in Omaha, Nebraska and has been in business since 1930. Northern Natural Gas owns and operates the largest interstate natural gas pipeline system in the United States. Northern Natural Gas' pipeline system stretches across 11 states, from the Permian Basin in Texas to Michigan's Upper Peninsula, providing access to five of the major natural gas supply regions in North America.

Northern Natural Gas, along with all of the Berkshire Hathaway Energy companies, believes responsible environmental management is good business; it benefits our customers and improves the quality of the environment in which we live. This belief is the basis for the [Environmental RESPECT Policy](#) that guides our efforts and commitment in the areas of Responsibility, Efficiency, Stewardship, Performance, Evaluation, Communication and Training.

## Historical Highlights

### Natural Gas Driven Pneumatic Device Transition

Pneumatic devices powered by pressurized natural gas are widely used throughout pipeline systems. As part of normal operation, these devices release or bleed natural gas to the atmosphere. Northern Natural Gas is systematically replacing these devices with low-bleed or no-bleed devices.



### Reduction in Pipeline Venting During Maintenance

When maintenance is required on a natural gas pipeline, natural gas must be vented to ensure safe working conditions. Northern Natural Gas has used many techniques to minimize the amount of natural gas that is vented, including using in-line compressors, portable compressors, Stopples® and hot taps.



# Northern Natural Gas Historical Fact Sheet

## Pipeline Leak Detection

Northern Natural Gas conducts ground and aerial leak detection surveys and systematically employs cutting-edge technology for aerial leak detection. This program has successfully identified small leaks on the system that otherwise may have gone undetected for longer periods of time. Identified leaks are responded to quickly and mitigation plans implemented as soon as possible.



## Reciprocating Compressor Rod Packing Leak Detection

Northern Natural Gas actively monitors the rod packing on reciprocating compressors for leaks. By replacing the packing as leaks are detected, instead of simply basing replacements on run time hours, Northern Natural Gas drastically reduces methane emissions through early detection of leaks. At the same time, Northern Natural Gas is saving money in replacement costs by avoiding the unnecessary replacement of seals that are still functioning properly.



## Elimination of Wet Seal Centrifugal Compressors

Since 2005, Northern Natural Gas has only purchased centrifugal compressors with dry seals. As new centrifugal compressors are needed and old ones are replaced, this company-wide policy contributes to our standing commitment to reduce methane emissions. This policy will also save money in monitoring and seal replacement costs, impacting the bottom line as well.

