



National Fuel Gas Supply Corp.

Transmission & Storage
BMP Commitment Option
Methane Challenge Partner Since 2018

OMB Control No. 2060-0722
Approval expires 08/31/2021



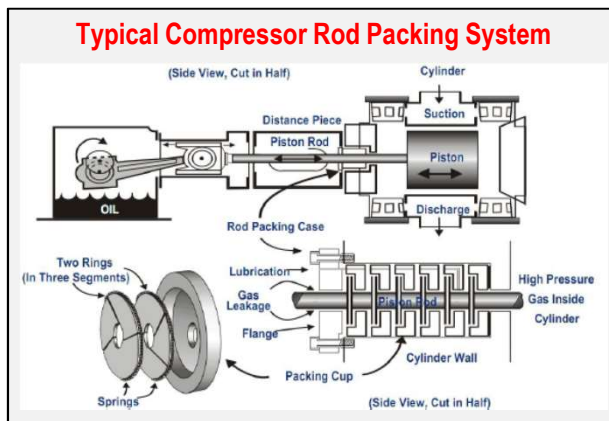
Background

The Pipeline & Storage segment of National Fuel Gas Company specializes in the interstate transportation and storage of natural gas. For more than 100 years, we've been successfully serving local utilities, pipelines, marketers and electricity generators. Supply's approximately 2,500-mile FERC-regulated interstate natural gas pipeline system extends from southwestern Pennsylvania to the New York-Canadian gateway at Niagara, eastward to the Ellisburg-Leidy Hub, and westward to the Appalachian Basin. For years Supply has engaged in methane reduction BMPs, some of which are highlighted below from the last five years. Please visit our website for more information on our continued commitment towards environmental stewardship.

Historical Highlights

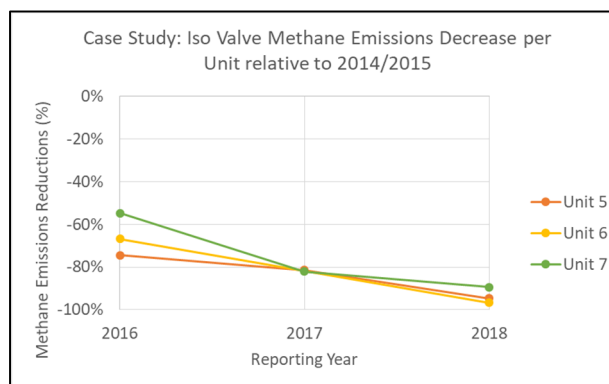
Compressor Rod Packing

Monitoring and replacing compressor rod packing systems on a regular basis can greatly reduce methane emissions to the atmosphere. Supply has implemented interval based rod packing changes for reciprocating compressors. This practice has resulted in methane reductions of approximately 508,000 Mscf for the past 5 years.



Isolation Valve Program

The EPA annual greenhouse gas (GHG) inventory data indicates about 80-90% of fugitive leaks at T&S compressor station emissions are from compressor components which include isolation valves, blowdown valves and rod packing. Utilizing this information, Supply has implemented a program that focuses on isolation valve maintenance, repair, and/or replacement. Thus far, this program has resulted in methane reductions of approximately 223,000 Mscf.



Footnotes: Historical emissions savings were calculated utilizing site specific data, estimated emission reductions as listed in EPA's Background Technical Support Document for 40 CFR Part 60, Subpart OOOOa, estimated emission reductions as in EPA's Natural Gas STAR Partner Reported Opportunities (PRO) Fact Sheets and rely on methodology outlined in 40 CFR Part 98. Some images and figures belong to NFGSC and the rest were borrowed from EPA's Natural Gas STAR PRO Fact Sheets and vendor documentation. The look back period was from 2014-2018.

National Fuel Gas Supply Corp. Historical Fact Sheet



Capped ESD Testing

Department of Transportation (DOT) requires emergency shut down (ESD) systems at natural gas compressor stations be fully tested on an annual basis. To minimize gas vented to the atmosphere, Supply adopted the acceptable DOT alternate of utilizing blind flanges. The blind flanges prevent entire station blowdowns, while allowing ESD testing in order to meet DOT requirements. Over the last 5 years approximately 202,000 Mscf of methane has not been vented while utilizing this alternative practice.



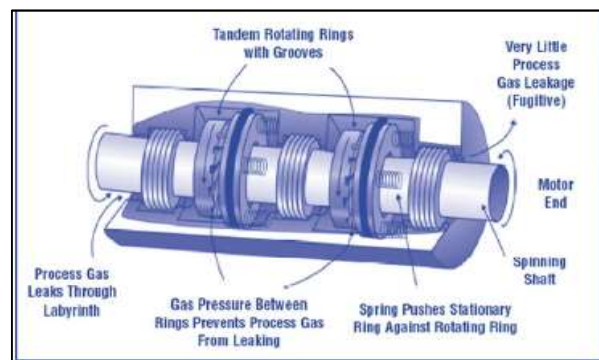
Eliminating Facilities

Operating demands change over time. Supply has chosen to eliminate a number of compressor engines and facilities across its system. These retirements have saved approximately 229,000 Mscf of methane over the past 5 years.



Dry Seals

Dry gas seal technology significantly reduces methane from centrifugal compressors. Supply has ensured that all centrifugal compressors have dry seals. This design decision has resulted in methane reductions of approximately 186,000 Mscf in the past five years.



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