

Seneca Resources Company, LLC

Onshore Production, Gathering & Boosting, and Natural Gas Processing Best Management Practice Commitment Option Methane Challenge Partner Since 2018



Background

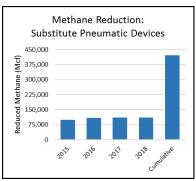
Seneca Resources Company, LLC (Seneca), the exploration and production segment of National Fuel Gas Company, explores for, develops and produces natural gas and oil reserves in California and the Appalachian Region including the Marcellus and Utica Shales. Seneca is committed to reducing methane emissions and to limit its environmental footprint. Since joining EPA voluntary methane reduction programs, Seneca has documented methane reduction strategies totaling 1,895,075 Mcf from 2015 through 2018. In 2018 Seneca expanded its participation in voluntary methane reduction strategies aimed at continuous improvement.

Historical Highlights

Substitute Pneumatic Devices with Low or Zero-bleed Devices

Seneca has identified and categorized its pneumatic controllers. In total, 1022 of these devices have been substituted to low or zero-bleed controllers. This has resulted in a methane reduction of 419,355 M cf.

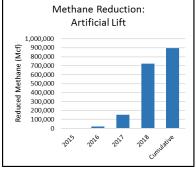




Artificial Lift: Plungers/ Foaming Agents/Nitrogen Lift

Seneca proactively utilizes several artificial lift technologies in an effort to maximize the well's flowing performance which minimizes potential methane emissions. Some of these technologies include installing plunger lifts, employing foaming agents, and utilizing nitrogen lift procedures. This methane reduction strategy has resulted in 896,778 M cfof reduced emissions.



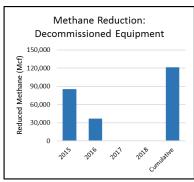


Seneca Resources Company, LLC Historical Fact Sheet

Eliminate unnecessary equipment and/or systems

Seneca regularly reviews engineering and design of both existing and new facilities and equipment in order to identify opportunities to eliminate redundant and/or unnecessary equipment. Past improvements have included compression systems, produced water tanks, test/bulk separators, and gas processing equipment. Through these engineering improvements, Seneca has been able to achieve a methane reduction of 121,718 M cf.

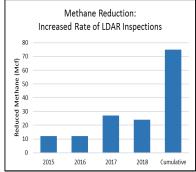




Increased Rate of LDAR Inspections

In an effort to proactively identify and repair all methane leaks, Seneca performs Leak Detection and Repair Inspections following and often exceeding the most stringent regulatory requirements across all of it's facilities regardless of applicability. This increased inspection schedule has reduced potential methane emissions by an estimated 75 M cf since 2015.

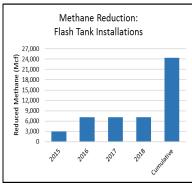




Install Flash Tank Separators on Glycol Dehydrators

Seneca has reduced its methane emissions by 21,507 Mcfthrough the installation of Flash Tank Separators on its glycol dehydrators.





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