



## Gas Company ESG/Sustainability Quantitative Information

Parent Company:  
 Operating Company(s):  
 Business Type(s):  
 State(s) of Operation:  
 Regulatory Environment:  
 Report Date:

National Fuel Gas Co.  
 National Fuel Gas Distribution Corp. (NFGDC)  
 Natural Gas Utility  
 New York and Pennsylvania  
 Regulated

Ref. No.	Refer to the "Definitions" column for more information on each metric.	Last Year 2017	Current Year 2018	% Change	Comments
<b>Natural Gas Distribution</b>					
<b>1</b>	<b>METHANE EMISSIONS AND MITIGATION FROM DISTRIBUTION MAINS</b>				
1.1	Number of Gas Distribution Customers	743,500	750,200	0.9%	Customers at end of fiscal year
1.2	Distribution Mains and Services in Service				
1.2.1	Plastic (miles)	8,691	8,831	1.6%	
1.2.2	Cathodically Protected Steel - Bare & Coated (miles)	3,176	3,213	1.2%	
1.2.3	Unprotected Steel - Bare & Coated (miles)	2,273	2,128	-6.4%	
1.2.4	Cast Iron / Wrought Iron - without upgrades (miles)	415	384	-7.5%	NFGDC has no cast iron mains remaining in its Pennsylvania operating territory and 46 miles of cast iron overall as of 12/31/18.
1.2.5	Total Mains (miles)	14,555	14,556	0.0%	
1.2.6	Plastic Services	536,332	541,933	1.0%	
1.2.7	Protected Steel Services	52,657	51,688	-1.8%	
1.2.8	Unprotected Steel Services	63,564	60,004	-5.6%	
1.2.9	Total Services	652,553	653,625	0.2%	
1.3	Plan/Commitment to Replace / Upgrade Remaining Miles of Distribution Mains (# years to complete)				As a participant in the EPA's Methane Challenge, NFGDC has committed to a minimum annual replacement rate of 3% for unprotected steel and cast/wrought iron mains along with associated service lines. Since 2012 NFGDC has retired 673 miles of unprotected steel and 155 miles of cast/wrought iron mains along with 24,835 associated service lines.
1.3.1	Unprotected Steel (Bare & Coated) (# years to complete)	25	24		
1.3.2	Cast Iron / Wrought Iron (# years to complete)	5 (CI only)	4 (CI only)		Wrought iron is included in the unprotected steel replacement rate
<b>2</b>	<b>Distribution CO<sub>2</sub>e Fugitive Emissions</b>				
2.1	CO <sub>2</sub> e Fugitive Methane Emissions from Gas Distribution Operations (metric tons)	271,613	257,815	-5.1%	
2.2	CH <sub>4</sub> Fugitive Methane Emissions from Gas Distribution Operations (metric tons)	10,865	10,313	---	
2.2.1	CH <sub>4</sub> Fugitive Methane Emissions from Gas Distribution Operations (MMSCF/year)	566	537	---	
2.3	Annual Natural Gas Throughput from Gas Distribution Operations in thousands of standard cubic feet (Mscf/year)	133,307,050	152,123,551	14.1%	
2.3.1	Annual Methane Gas Throughput from Gas Distribution Operations in millions of standard cubic feet (MMscf/year)	126,642	144,517	---	

2.4	Fugitive Methane Emissions Rate Percent (MMscf of Methane Emissions per MMscf of Methane Throughput )	0.447%	0.372%	-16.8%	Note: Emissions estimates are computed from activity data (miles of main, number of services) and emission factors that are unrelated to throughput. As such, users should consider 'emissions rate' in the context of other metrics
<b>Natural Gas Utility Transmission and Storage</b>					
NFGDC does not meet the reporting threshold for this segment					
<b>Natural Gas Utility Gathering and Boosting</b>					
NFGDC does not meet the reporting threshold for this segment					
<b>Additional Metrics (Optional)</b>					
	Heating Degree Days, Buffalo, NY	6,001	6,514	8.5%	Provides additional context to throughput and emissions rate. Source: NYSERDA website ( <a href="https://www.nyserda.ny.gov/About/Publications/EA-Reports-and-Studies/Weather-Data/Monthly-Cooling-and-Heating-Degree-Day-Data#Buffalo">https://www.nyserda.ny.gov/About/Publications/EA-Reports-and-Studies/Weather-Data/Monthly-Cooling-and-Heating-Degree-Day-Data#Buffalo</a> ) accessed 8/29/19.
	Utility Fugitive Methane Emissions (as CO <sub>2</sub> e) per Total Miles of Main [MT CO <sub>2</sub> e/mile]	18.7	17.7	-5.1%	Natural Gas Distribution Section item 2.1 divided by sum of 1.2.1 to 1.2.4
	Indirect (End-User/Scope 3) Emissions [MT CO <sub>2</sub> ]	6,615,365	7,180,490	8.5%	As reported to EPA, 40 CFR Part 98, Subpart NN