

Q. What are Southern Company's fugitive emission intensity rates and how is it calculated and tracked?

The methane emissions intensity rate is calculated as the volume of fugitive methane emissions divided by the total volume of methane throughput and expressed as a percentage. In 2019, Southern Company Gas' ONE Future fugitive methane emissions intensity rate was 0.135%, where the total methane emissions were 1,043 million standard cubic feet (MMscf) and methane throughput was approximately 770,818 MMscf (or 825,287 MMscf of natural gas).

Q. What is Southern Company's fugitive emission intensity reduction progress and targets?

In 2014, Southern Company Gas voluntarily elected to establish a total methane emissions baseline using a methodology that exceeds Environmental Protection Agency (EPA) reporting requirements. The more robust methodology was developed as part of Southern Company Gas' involvement as a 2014 founding member in Our Nation's Energy Future Program (ONE Future), a coalition of leading companies with operations in every part of the natural gas value chain. ONE Future companies aim to achieve a voluntary goal of reducing methane emissions to 1 percent or less by 2025. The methodology includes those sources captured in EPA's GHG Reporting Program, EPA's National Inventory and additional emission sources which are not included by EPA. Southern Company Gas' emissions intensity reduction goals mirror those established by the ONE Future. Southern Company Gas' current intensity rate of 0.135% is less than ONE Future goals for the distribution sector for 2020 (0.48 percent) and 2025 (0.44 percent). Southern Company Gas expects to continue to remain below ONE Future's 2020 and 2025 goals.

Q. What are Southern Company's leak detection and repair protocols?

Southern Company Gas performs leakage surveys of its pipelines in accordance with Federal Pipeline Safety Regulations (49 CFR Part 192). Specifically, transmission lines are surveyed annually for leaks in accordance with CFR Part 192.706; business districts are surveyed annually in accordance with CFR Part 192.723 (b) (1); and the remaining distribution pipelines are surveyed for leaks every three or five years, in accordance with CFR Part 192.723 (b) (2). Leakage surveys are conducted using a combination of aerial, vehicular, and foot surveys with electronic leak detection equipment.

Concerning leak repair protocols, leaks are monitored and repaired in accordance with the national guidance material associated with CFR Part 192.723. Repairs on hazardous leaks are started immediately upon discovery. Non-hazardous leaks that have the potential to become hazardous, are repaired within 12-15 months of discovery.

Q. What are Southern Company's pipeline replacement programs, actual replacements, leaks scheduled for repair and lost and unaccounted for gas?

Southern Company Gas has been a leader in pipeline replacement since the 1990s, putting it at the forefront of reducing GHG emissions. The company has replaced much of its older pipe with polyethylene or corrosion resistant steel pipes, and it reports progress each year through public utility commissions and other government agency filings. From 1998 to 2018, Southern Company Gas replaced over 6,000 miles of pipe material that is more prone to fugitive emissions (e.g. unprotected steel and cast-iron pipe), resulting in mitigation of more than 3.3 million metric tons of CO₂ equivalent (CO₂e).

Southern Company Gas Pipeline Replacement Program Overview*

LDC	Pipeline Replacement Program Priorities	Distribution Miles Retired (2019)					Known Leaks	Unaccounted for Gas**
		Steel	Iron	Plastic	Copper	Total		
Atlanta Gas Light	Risk Based Projects	13.1	-	3.0	-	16.1	133	1.35
Nicor Gas	Cast Iron, Bare Steel, Vintage Plastic, and Risk Based Materials	172.78	-	7.73	-	180.51	2,781	1.56
Virginia Natural Gas	Cast Iron, Bare Steel and Risk Based Materials	17.4	1.7	2.6	0.2	21.8	147	4.64
Chattanooga Gas Company	Bare Steel & Cast Iron	7.1	1.2	1.6	-	9.9	41	1.09

*Data is only associated with pipeline integrity renewals and excludes new business, DOT projects, etc. Data is based on data reported in the 2019 Pipeline and Hazardous Materials Safety Administration F 7100.1-1 Annual Report

** Lost and Unaccounted for Gas (L&U) percentages reflect the impact of multiple factors. The typical factors that contribute to L&U (listed in order of the largest volume of gas to the smallest) are: Meter Calibration; Timing of Meter Reads; Consumption on Inactive Meters; System Leakage; System Operations and Maintenance and; Excavation Damages. Volumes of gas from the first three sources (the largest sources) are consumed by appliances and not released into the atmosphere as natural gas.