

### **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 2016, Southern Company Gas' fugitive methane emissions intensity rate was 0.25 percent, where the total methane emissions were 1.9 million standard cubic feet (MMscf) and methane throughput was approximately 767,000 MMscf.

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

In 2014, Southern Company Gas voluntarily elected to establish a total greenhouse gas (GHG) 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 0.25 percent is less than ONE Future goals 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 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. Since 1998, Southern Company Gas has replaced 5,300 miles of bare steel and cast iron pipe and, as a result, has removed 2.5 million metric tons of carbon dioxide equivalent (CO<sub>2</sub>e) from its natural gas distribution system.

Southern Company Gas continues to work diligently with state public service commissions to remove aging pipe from its system. All seven local distribution companies continue to achieve methane emission reductions through system modernization.

### 2016 Southern Company Gas Pipeline Replacement Program Overview\*

Local Distribution Company	Pipeline Replacement Program Priorities	Miles Renewed				Leaks Scheduled for Repair	Lost and Unaccounted for Gas**
		Steel	Iron	Plastic	Total		
Atlanta Gas Light	Vintage Plastic and Other Risk Based Materials	71		197	268	179	0.78%
Nicor Gas	Cast Iron, Bare Steel, Vintage Plastic, and Risk Based Materials	152	40	5	197	2260	0.99%
Chattanooga Gas Company	Cast Iron and Bare Steel	4	0	2	6	43	0.20%
Elkton Gas	Risk Based Material	0.03			0.03	0	1.63%
Elizabethtown Gas	Cast Iron and Bare Steel	4	48	5	57	657	1.61%
Florida City Gas	Rear Easement Replacement Program	23		1	24	6	0.92%
Virginia Natural Gas	Cast Iron, Bare Steel and Risk Based Materials	45	2	8	54	485	2.75%
<b>Total</b>		<b>299.03</b>	<b>90</b>	<b>263</b>	<b>606.03</b>	<b>3,630</b>	<b>N/A</b>

\* Data also reported in the 2016 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.