AMERICAN PUBLIC GAS ASSOCIATION

September 10, 2013

The Honorable Edward J. Markey
U.S. Senator
218 Russell Senate Office Building
Washington, DC 20510

Dear Senator Markey:

On behalf of the American Public Gas Association (APGA), I need to express some concerns about your recently issued report on unaccounted for gas (UAF) titled, "America Pays for Gas Leaks: Natural Gas Pipeline Leaks Costs Consumers Billions."

APGA readily recognizes natural gas leaks as an important issue for Local Distribution Companies (LDCs) and one that must be expeditiously addressed by utilities. We also believe, however, that this well-intentioned report significantly overstates the amount of UAF from LDCs. As set forth below, the report relies on inaccurate EPA data which fails to consider the primary drivers of UAF such as LDC gas use, measurement error, and billing cycle issues.

APGA is the national association for publicly-owned natural gas distribution systems. There are currently approximately 1,000 public gas systems located in 37 states. Publicly-owned gas systems are not-for-profit, retail distribution entities owned by, and accountable to, the citizens they serve. They include municipal gas distribution systems, public utility districts, county districts, and other public agencies that have natural gas distribution facilities.

APGA supports policies to replace bare steel and cast iron pipe. Our members work diligently to replace the comparatively little of it that they have. Out of 124,000 total miles of main, only 3,300 miles were made of cast iron and only 3,300 miles were made of bare steel at the end of 2010. Moreover, a survey of APGA members indicates four percent of cast iron and seven percent of bare steel were removed from service in 2011 alone and our members continue to make strides in replacement every year.

As you are aware, UAF is the difference between the volume of gas received by a utility and the volume of gas delivered to customers or used by the utility. As noted above, it is unfortunate the report relies on inaccurate and outdated EPA data. For example, the report cites leakage factors from the EPA's Subpart W fugitive emission reporting rule—

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Cast iron and bare steel are the most leak-prone pipe materials, releasing 27.25 and 12.58 cubic feet of methane per hour, per mile, respectively, according to the EPA.

EPA's emission factors are based on a 1993 study of a limited number of gas pipeline leaks that are not representative of the industry as a whole. The study was the released over the objections of its advisory group due to critical errors, some of which are included below:

- EPA's leak rate for coated steel mains is ¼ the leak rate for plastic mains, but that same steel pipe, if used as a service line, leaks 20 times more than a plastic service line.
- According to EPA, a mile of cast iron main leaks more (27.25 cf/hr) than an open-ended line at a gate station (26.131 cf/hr).
- EPA required utilities to report cast iron and steel mains as leaking even if recent inspections of these mains found no leaks.

The report's reliance on EPA's inaccurate data significantly overstates the total leakage from the distribution system. As such, APGA believes that this inaccurate EPA data cannot be credibly used as a part of the evaluation of methane emissions.

Moreover, your report makes a crucial error by assuming that all UAF is leaked into the atmosphere. Most experts agree that leaks are a small component of UAF, while other factors play more significant roles in UAF.

For example, one of the key sources for UAF is LDC use of gas as a regular part of gas distribution. When an LDC takes delivery from its gas supplier at the gate station, the gas pressure is reduced, causing the gas to cool. This reduction in temperature can lead to the formation of methane hydrates which can damage or plug distribution lines. In order to avoid methane hydrates, gas-fired heaters are commonly used to reheat the gas and the gas burned in these heaters is often not measured.

Another example is when an LDC uses natural gas for other utility applications such as heating air and water in utility offices, warehouses and workshops. For some municipally-owned utilities, natural gas delivered to other city-owned buildings is not metered— all of this internal consumption of natural gas by a utility contributes to the total UAF number, but this internal consumption should not be categorized as a leak.

Another key driver of UAF is measurement issues. As you know, the amount of gas in a cubic foot of volume depends on temperature and pressure. Natural gas sales volumes are usually calculated at a standard temperature of 60 degrees Fahrenheit and a standard pressure of 14.7 pounds per square inch (approximately atmospheric pressure at sea level). If the actual gas temperature is below 60 degrees, then there will be more than one standard cubic foot of gas in one cubic foot of volume. For every 5 degrees below 60 degrees, about one percent more gas will fit into one cubic foot of volume. For every 5 degrees above 60 degrees, there will be one percent less gas in each cubic foot of volume.

A utility typically receives most, if not all, of its gas from transmission pipelines at gate stations that employ very sophisticated and accurate metering systems that adjust for variations in pressure and temperature. Most utility customer meters, however, are not temperature compensated, therefore variations in gas temperature will affect customer meter accuracy. When gas temperatures are below 60 degrees, more than one standard cubic foot of gas will be in each actual cubic foot of gas recorded by the meter. Since most utilities sell more gas when temperatures are cold, sales meters may underreport actual sales. Very accurately measured gas receipts at one end of the pipeline coupled with undercounting of gas deliveries results in UAF, but it is not leaked gas.

Finally, the timing of the measurement of customers' meters also affects UAF. A utility may be billed by its gas supplier as of the end of each month, but customers' gas sales meters are typically read over the course of the month.

For example, on January 1, the utility may get from its supplier exactly how much gas it received during the prior year, but when it adds up 12 months of customer bills, some will be for meters read December 1 through December 1, December 2 through December 2, etc. Unless every customer meter is read on December 31, the utility can never have comparable gas receipt and delivery volumes. This means that meter reading cycles also affect UAF. If the utility changes its customer meter reading schedule, that can also affect UAF.

It is important that federal policies regarding methane emissions be based on sound science. Unfortunately, neither EIA's UAF data nor EPA's Subpart W report provide said necessary sound science. APGA understands that EPA is currently conducting research into measuring methane leakage, and we applaud this effort and look forward to working with them and others toward the goal of accurately measuring methane emissions.

On behalf of APGA, thank you for considering our views. We stand ready to work with you and all other members of congress to ensure that the issue of methane emissions is addressed in a common sense, sound science, and cost-conscious manner to protect consumers and the environment.

Sincerely,

Bert Kalisch
President & CEO