

PRESS RELEASE: for immediate release 3/25/13

## **Actual Methane Emissions Measured in Manhattan Showing No Advantage to Natural Gas: Two Reports**

Report on a Preliminary Investigation of Ground-Level ambient Methane Levels in Manhattan, New York City, New York

Extended Report on Preliminary Investigation of Ground-Level Ambient Methane Levels in Manhattan, New York City, New York

Authors: Robert Ackley and Bryce F. Payne Jr., PhD.  
Gas Safety, Inc., Southborough, MA [www.GasSafetyusa.com](http://www.GasSafetyusa.com)

Commissioned by Damascus Citizens for Sustainability

“The methane leakage in the system serving NYC through ConEd is likely already at a level where the methane leaked has as much, or more, climate impact as the remaining approximately 95% of the gas that is actually usefully burned by consumers in NYC.” states, Dr. Bryce Payne.

The Gas Safety, Inc. Preliminary Report states data findings that indicate Manhattan sits in a cloud of elevated levels of methane. The Extended Report reviews existing estimates and estimating procedures of methane emissions by industry, government and other sources (including the EPA/Gas Research Institute 1996 method). Based on those reviews DCS is forced to conclude that those estimates are so inaccurate as to be almost useless – in fact, misleading.

The actual measurements in this report added to measured production losses and estimated transmission losses produces a total gas loss above 5%. This number is well above the critical benchmark level of less 3.2%, at which level natural gas no longer retains an advantage over other forms of fossil fuels with regard to climate change. Since natural gas is 93% methane, and methane is more than 20 times more potent a GreenHouse Gas (GHG) than CO<sub>2</sub>, the level of leakage shows that natural gas should not be considered a “bridge fuel”. We now have valuable evidence that current steps of continuing and increasing natural gas use would only accelerate climate change.

In November and December of 2012, Damascus Citizens for Sustainability commissioned a preliminary overview investigation by Gas Safety, Inc. of fugitive emissions of natural gas in

Manhattan to better understand gas distribution systems in the context of global climate concerns. The methane measurements in Manhattan indicated many leaks, some intense. Very few measurements indicated normal background methane levels. Gas Safety, Inc. recorded emission data during a 160-mile survey on Manhattan streets, using a Picarro device equipped with Cavity Ring-Down Laser Spectrometer measuring equipment.

This report takes an innovative approach using actual measurements and an elegantly simple method that arrives at the conclusion that there is no advantage to natural gas over coal or oil. The authors developed a rapid assessment method based on actual methane measurements and meteorological data that was used to generate an estimate of total methane emissions in Manhattan. This emissions estimate made it possible to assess the relative impact of gas service in Manhattan, most importantly in the broader context of GHG and climate change. In addition, there are other issues: the extra cost to consumers of loss of product; the damage to trees and other organisms; the danger of explosion and toxicity to underground workers; and the public health threat of constantly escaping natural gas evidenced by elevated methane levels. (Remember, natural gas is a mixture of mostly methane, but also varying quantities of BETX, PAH, other VOCs, H<sub>2</sub>S, CO<sub>2</sub> and radioactive radon and radon decay products.)

There is an increasing awareness of methane as a potent greenhouse gas and its role in climate change. Because natural gas generates less carbon dioxide when burned, it has been considered a cleaner energy source than other fossil fuels. However, to look at the emission levels from burning alone is to hide natural gas' total greenhouse impact. If only some methane leaks into the atmosphere during extraction, transport and delivery to the consumer, then what had been assumed was a small gas carbon footprint is in reality a highly significant gas carbon footprint.

REPORTS available: <http://www.damascuscitizensforsustainability.org/2013/03/manhattan-natural-gas-pipeline-emissions-2/>

CONTACT: B. Arrindell, Director [dcs@DamascusCitizens.org](mailto:dcs@DamascusCitizens.org) #845-252-6677

Dr. Bryce Payne, [bryce.payne@gassafetyusa.com](mailto:bryce.payne@gassafetyusa.com)

Damascus Citizens for Sustainability (DCS)

Office: 25 Mail Street, Narrowsburg, NY 12764 Phone; 845-252-6677

Mail to: P.O. Box 147, Milanville, PA, 18443

website: [DamascusCitizens.org](http://DamascusCitizens.org)