

**AMERICAN PUBLIC GAS ASSOCIATION SUBMITTED TESTIMONY
TO THE SENATE ENERGY AND NATURAL RESOURCES COMMITTEE
ON THE ROLE OF NATURAL GAS IN ESTABLISHING A FEDERAL CLEAN
ENERGY STANDARD
MAY 17, 2012**

The American Public Gas Association (APGA) appreciates this opportunity to submit testimony and commends the Committee for holding this important hearing on S. 2146, the Clean Energy Standard Act of 2012.

APGA is the national association for publicly-owned natural gas distribution systems. There are approximately 1,000 public gas systems in 36 states and over 720 of these systems are APGA members. 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.

Natural gas is the cleanest, safest, and most useful of all fossil fuels. It is also domestically produced, abundant and reliable. The inherent cleanliness of natural gas compared to other fossil fuels, a growing domestic supply and superior wells-to-wheels efficiency of natural gas equipment, means that substituting gas for the other fuels will reduce the emissions of the air pollutants that produce smog, acid rain and exacerbate the "greenhouse" effect. Natural gas is the lowest CO₂ emission source per BTU delivered of any fossil fuel. Using gas-fired water heaters for homes instead of electric resistance water heaters ultimately reduces greenhouse gas emissions by one-half to two thirds. Increasing the direct-use of natural gas is the surest, quickest, and most cost-effective avenue to achieve significant reductions in greenhouse gases and therefore should be a critical component of any clean energy legislation.

In June, 2009 APGA, the Interstate Natural Gas Association of America and others released a study conducted by the Gas Technology Institute (GTI) entitled “Validation of Direct Natural Gas Use to Reduce CO2 Emissions”. The study analyzed the benefits of increased direct use of natural gas as a cost-effective means to increase full fuel cycle energy efficiency and reduce greenhouse gas emissions. Using the National Energy Modeling System (NEMS), the study concluded that the increased direct use of natural gas will reduce primary energy consumption, consumer energy costs, and national CO2 emissions.

The study demonstrated, among other things, that conversions to natural gas appliances from their electric counterparts will provide substantially higher and immediate return values in energy efficiency and carbon output reductions than an equal investment in electric applications.

Unfortunately, APGA is concerned that over the years federal policies have moved toward an all-electric society and have not recognized the benefits of the direct-use of natural gas. One example of this can be found in the manner in which the Department of Energy (DOE) calculates appliance efficiency. The DOE measurement takes into account energy solely consumed at the “site”, measuring the energy used by the product itself.

The site-based measurement of energy consumption ignores the energy spent in production, generation, transmission and distribution. For example, according to DOE’s point of use consumer disclosure labels for appliances, an electric water heater may appear to consumers to be over 60% more efficient than a gas water heater despite the fact that current national generation, transmission and distribution efficiency for central station electricity is, according to the U.S. Energy Information Agency, only 29.3% efficient while the transmission and distribution of natural gas directly to the consumer is 90.1% efficient. Ignoring these energy

losses makes electric-resistance heating appliances appear more efficient (allowing them to receive a superior DOE efficiency rating).

This site-based measurement has placed natural gas appliances at an unfair marketing disadvantage and as a result there has been a marked increase in shipments of electric water heaters and a decrease in shipments of natural gas water heaters. This increase in electric water heaters will come with an increase in greenhouse gas emissions given that electric water heaters emit 2.5 times the amount of greenhouse gas emissions as natural gas water heaters given the current make up of the sources of U.S. electric generation today. Renewable energy generation is poised to grow in the future, but makes up less than 2% (excluding hydro-electric) of generation today. Conversion from electric to natural gas appliances will provide a more immediate emissions reduction strategy than the many years it will take for large scale deployment of wind, solar and other renewable technologies.

Rather than a site-based measurement for energy consumption, APGA has advocated a “source-based” or “total energy” analysis that measures energy from the point at which energy is extracted through the point at which it is used. A total energy analysis provides a more accurate assessment of energy use, efficiency, as well as greenhouse gas emissions.

The proposed Clean Energy Standard Act of 2012 does not credit direct use of natural gas in the same manner as other clean energy sources. This legislation is missing the critical component of direct-use of natural gas as a means of meeting the CES. APGA strongly believes that if a utility that provides both natural gas and electric service were to meet new load requirements with the direct-use of natural gas, that utility should receive a credit under a CES in the same manner that it would receive a credit for utilizing clean and/or renewable energy sources for electricity generation. This approach would recognize and take full advantage of the benefits that the direct-use of natural gas provides in terms of efficiency and reduced greenhouse gas emissions. Direct-use of

natural gas in homes achieves 90% energy system efficiency, versus only 27% for electricity. Moreover, it would help reduce the need for additional electricity generation and provide electric/gas utilities with more flexibility in terms of complying with a CES while meeting future load requirements.

At a minimum, the direct-use of natural gas should be included in the Bill's directed study of alternative credited resources. The U.S. Energy Information Agency released its 2012 Annual Energy Outlook on January 23, 2012 with the claim that the Marcellus shale contains 141 trillion cubic feet (TCF) of recoverable natural gas. Federal policy should seek to maximize every BTU of this abundant domestic and low-carbon fuel by encouraging greater direct use into our homes and businesses for heating and cooking and other appropriate uses. Direct use into the home would be a far better use of this country's precious natural gas resources.

APGA appreciates this opportunity to submit comments and looks forward to working with the Committee towards fully utilizing the benefits of the direct-use of natural gas in efforts to establish a federal CES.