American Gas Association

2012

Full-Fuel-Cycle Energy Efficiency Standards:

A Best-Case Solution for Helping Consumers Make Energy Efficient Choices

Full-fuel-cycle energy **accounts for the efficiency and environmental impact of energy consumption from the point of fuel extraction to its final end use.** AGA supports full-fuel-cycle measurement and its adoption in building codes and appliance standards because it is the most comprehensive method to accurately compare the energy and environmental impact of consumer fuels and appliances.

- ✓ **Full-fuel cycle standards are a more accurate measurement of energy efficiency and greenhouse gas output.**
- ✓ **Two goals are paramount:**
  1) To improve energy efficiency we must measure all energy consumption and then seek ways to improve efficiency.
  2) To reduce greenhouse gas emissions we must measure all greenhouse gas emissions and then seek ways to reduce these emissions

Current "site-based" energy efficiency standards for appliances are based on the amount of energy used at the point of consumption, or site. Site energy measurement does not take into account the energy used to bring energy to the consumer.

Full-fuel-cycle evaluates the energy consumption and environmental impacts of energy extraction, processing, transportation, generation (in the case of electricity), distribution, and final end-use. A full-fuel-cycle-based energy efficiency standard would incorporate a comprehensive assessment of all this energy required power or fuel a home appliance, like a water heater, in order to enable consumers to make educated decisions regarding their energy use and better compare fuel and appliance options.

Using natural gas directly wastes very little energy. From the wellhead to the burner tip, natural gas used in homes and businesses loses only about 8 percent of its useable energy. When it comes to appliances, **natural gas is the smarter, cleaner and more efficient** choice.

Get the Facts:

FACT: The National Academy of Sciences (NAS) concluded in its May 15, 2009 study that the Department of Energy (DOE) and the Energy Information Administration "already collect much of the data that would be used to construct a full-fuel-cycle consumption-based estimate."[i] Further, NAS ***recommended that DOE "should consider moving over time to use of the full-fuel-cycle measure of energy consumption*** for assessment of national and environmental impacts, especially levels of greenhouse gas emissions, and to provide more comprehensive information to the public through labels and other means including an enhanced website."[ii]

This is the view not only of the American Gas Association but also of the Natural Resources Defense Council (NRDC), which both fully support those recommendations.[iii]

FACT: ***Site based measurement provides consumers with only half the picture.*** While it may be easier to measure, it simply measures the wrong thing. The goal of energy efficiency is to maximize the productivity of available resources; full-fuel-cycle-based standards do just that, site-based standards do not.

FACT: Site-based measurement can be linked to increased efficiency, but only related to the efficiency of the appliances themselves. Simply because energy measurements have always been done one way does not make it the right solution, especially when doing so does not support the efficient use of resources. Consumers need to understand impact of their appliance choices on energy use and the environment if we are to improve the efficiency of our energy delivery systems.

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[i] *Review of Site (Point-of-Use) and Full-Fuel-Cycle Measurement Approaches to DOE/EERE Building Appliance Energy-Efficiency Standards*, The National Academies National Research Council Committee on Point-of-Use and Full-Fuel-Cycle Measurement Approaches to Energy Efficiency Standards, (May 15, 2009) at 9. http://www.nap.edu/catalog.php?record_id=12670

[ii] *Id*. at 12, Recommendation 1.

[iii] Joint Statement of the American gas Association and the Natural Resources Defense Council Endorsing the National Research Council's Recommendations for Full-Fuel-Cycle Energy Consumption Measurement to Improve U.S. Energy Efficiency (September 9, 2009). http://www.aga.org/Newsroom/news+releases/2009/AGAandNRDCJoinForces.htm