



AMERICAN PUBLIC GAS ASSOCIATION

April 8, 2013

Bryan Steverson
Sustainability Program Advisor
U.S. General Services Administration
1275 First Street, NE
Washington, DC 20417

RE: Notice-MG-2012-04; Docket 2012-0002

Dear Mr. Steverson:

The American Public Gas Association (APGA) is pleased to submit comments in response to the Request for Information issued by the U.S. General Services Administration (GSA), in the Federal Register on February 5, 2013, seeking public input on the green building certification system(s) for use by the Federal government.¹

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 700 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. For more information, please visit www.apga.org.

As noted in the Request, the Energy Independence and Security Act of 2007 requires GSA to evaluate green building certification systems and to provide a formal recommendation to the Secretary of Energy on how such systems and related standards can be most effectively used by the Federal government to advance high performance in buildings. According to the Request, GSA has evaluated three green building certification systems against new construction and existing building requirements. Those systems include: (1) Green Building Initiative's Green Globes (2010); (2) U.S. Green Building Council's Leadership in Energy and Environmental Design (2009); and (3) the International Living Building Institute's Living Building Challenge (2011). GSA concluded that none of the existing systems as designed meets all of the Federal government's needs for high performance building metrics. GSA seeks public input on the Federal role in evolving green building certification systems, as well as the standards and tools needed to address Federal agency requirements and to support evolution in the market.

APGA Comments

APGA supports energy ratings and building certification systems that reflect either source or full-fuel-cycle energy metrics. Site-based energy metrics measure the energy consumption or emissions associated with the use of a particular appliance at its point of use. However, ignore all of the energy needed to deliver the energy to the site. Site metrics fail to account for the energy losses expended and the associated environmental impacts incurred between the processes of energy extraction through delivery to the point of final consumption, when comparing fuels. Both the U.S. Environmental Protection Agency

¹ *Sequence 24 Findings of the EISA 436(h) Ad-Hoc Review Group on Green Building Certification Systems*, 78 Fed. Reg. 8145 (Feb. 5, 2013).

(EPA)² and APGA have long maintained that the only equitable way to measure the relative energy contents of natural gas and electricity is on a full-fuel cycle basis. A full-fuel-cycle analysis examines all impacts associated with energy use, including those from extraction/production, conversion/generation, transmission, distribution, and ultimate energy consumption.

Source or full-fuel-cycle metrics enable a more comprehensive analysis of the total energy usage and environmental impacts associated with building energy systems. Such metrics are also useful for more accurately calculating the energy consumption and environmental impacts of hybrid or multi-fuel building energy systems, and would level the playing field for systems that can use different fuels by providing a proper basis for comparison of energy usage and emissions. By way of example, for appliances that use natural gas most of the energy losses and emissions occur at the point of use. The overall natural gas delivery system, from extraction and production, through processing, transportation, and delivery to end use is relatively efficient – approximately 92% of the energy produced reaches the consumer as usable energy, where electricity is only about 32% efficient, with about 64% lost in generation.³ While building energy systems that use natural gas may seem to consume more energy and have a greater carbon footprint on a site-basis than other types of systems, they can consume less energy and have a far smaller carbon footprint overall when source or full-fuel-cycle metrics are considered.

Natural gas is the cleanest, safest, and most useful of all fossil fuels. The inherent cleanliness of natural gas compared to other fossil fuels, as well as strong domestic supply projections and superior 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 appliances for homes instead of electric ultimately reduces greenhouse gas emissions by one-half to two thirds. Simply put, 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 green buildings certification program. One consequence of using a site-based metric is to promote fuel switching in the design decision away from more full-fuel-cycle energy efficient and lower greenhouse gas emitting gas technologies toward more site energy efficient electric technologies. To promote energy efficiency and lower greenhouse gas emissions, a full-fuel-cycle metric should be used.

On August 18, 2011, the Department of Energy (DOE) issued a Statement of Policy (SOP)⁴ announcing its plans to adopt full-fuel-cycle energy analyses into their Energy Conservation Standards Program, based on recommendations to that effect by The National Academies (of Science, of Engineering, Institute of Medicine, and the National Research Council)⁵. Specifically, DOE intends to use full-fuel-cycle energy measures of energy use and emissions, rather than site energy measures.

With this background in mind, APGA urges GSA to use the Green Building Initiative's Green Globes (2010) green building certification system for new buildings. APGA believes that Green Globes better

² ENERGY STAR Performance Ratings – Technical Methodology, page 4 (2011)
http://www.energystar.gov/ia/business/evaluate_performance/General_Overview_tech_methodology.pdf

³ U.S. Energy Information Administration, *Annual Energy Review 2011*, Table 2.1b.

⁴ *Energy Conservation Program for Consumer Products and Certain Commercial and Industrial Equipment; Statement of Policy for Adopting Full-Fuel-Cycle Analyses Into Energy Conservation Standards Programs*, 76 Fed. Reg. 51281 (Aug. 18, 2011).

⁵ National Research Council. *Review of Site (Point-of-Use) and Full-Fuel-Cycle Measurement Approaches to DOE/EERE Building Appliance Energy-Efficiency Standards--Letter Report*. Washington, DC: The National Academies Press, 2009.

reflects consideration of source energy metrics than the other building certification systems. Moreover, as noted in the Request, GSA's recent evaluation of the systems found that Green Globes aligns with more of the Federal requirements for new construction than the other systems evaluated.

With respect to existing buildings, APGA encourages GSA to use the ENERGY STAR for Commercial Buildings Portfolio Manager developed by the EPA to evaluate the energy rating of existing buildings. GSA could combine this energy ratings approach with non-energy ratings of other approaches such as ASHRAE Standard 189.1 prescriptive requirements to provide a comprehensive approach to green building certification in the existing buildings market. In addition, since Green Globes uses EPA's Portfolio Manager as the basis for its energy ratings approach, green building certification would be methodologically consistent across new and existing buildings. Further, since EPA's Portfolio Manager reflects source-based energy metrics, Portfolio Manager provides a direct means of assessing the relative environmental impacts of building options for design and modification.

Finally, APGA believes that GSA should not adopt the International Living Future Institute's Living Building Challenge as a green building certification system. The criteria used in that program prohibit the use of on-site fossil fuels generally, including the use of natural gas building energy systems with few and limited exceptions. As discussed above, natural gas energy systems can consume less energy and have a smaller carbon footprint overall on a source or full-fuel-cycle basis than other energy systems, such that their use should not be prohibited.

APGA thanks the General Services Administration for its consideration of these comments.

Respectfully submitted,

A handwritten signature in blue ink, appearing to read "Bert Kalisch".

Bert Kalisch, CEO
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