



# AMERICAN PUBLIC GAS ASSOCIATION

April 29, 2013

Kathleen B. Hogan  
Office of Energy Efficiency and Renewable Energy  
U.S. Department of Energy  
1000 Independence Avenue, SW  
Washington, DC 20585

**RE: Notice of Proposed Rulemaking and Announcement of Public Meeting, Waiver of Federal Minimum Efficiency Standard for Electric Storage Water Heaters with Storage Volumes over 55 Gallons. Docket No. EERE-2012-BT-STD-0022, RIN:1904-AC78.**

Dear Ms. Hogan:

The American Public Gas Association (APGA) is pleased to submit comments in response to the Notice of Proposed Rulemaking Waiver of Federal Minimum Efficiency Standard for Electric Storage Water Heaters with Storage Volumes over 55 Gallons issued by the U.S. Department of Energy (DOE), Office of Energy Efficiency and Renewable Energy (EERE), in the Federal Register on February 26, 2013.<sup>1</sup>

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](http://www.apga.org).

In the proposed rule, DOE proposes to establish a waiver process that would allow the manufacture of certain large volume electric storage water heaters. Subsequent to the publication of the April 2010 Final Rule, several stakeholders communicated to DOE their concerns about the interaction of the amended standards in the April 2010 final rule and the use of electric storage water heaters with tanks having 55 gallons or more of rated storage volume used in electric thermal storage programs (ETS). These ETS programs are used by utilities to manage peak demand load by limiting the times when certain appliances are operated. The programs typically allow the utility to allow operation of the appliance only during off-peak hours. The stakeholders argued that the large volume electric water heaters are necessary because they allow for the storage of enough hot water to meet consumer usage during peak demand times when the water heater would not be allowed to turn on.

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<sup>1</sup> *Energy Conservation Program for Consumer Products: Energy Conservation Standards for Residential Water Heaters*, 78 FR 12969 (February 26, 2013).

APGA would first like to note that none of the impacts discussed with respect to electric utility ETS programs were raised during the rulemaking process that led to the 2010 final rulemaking, and neither DOE's analysis documented in the "Utility Impact Analysis" or consumer impacts coverage identified these issues.<sup>2</sup> As noted in this proposed rule, these concerns were raised only subsequent to the issuance of the final rule.

DOE's proposed waiver procedures cannot provide for adequate enforcement of installation in service territories with the targeted ETS smart grid programs. The appliance minimum efficiency standards apply to the manufacture of covered products, including electric storage water heaters. This waiver would allow manufacturers to produce large volume electric storage water heaters. In the case of a manufacturer application for waiver, the only material information required of manufacturers is the identification of utility ETS programs. The waiver neither restricts marketing or sales to those service territories nor prohibits sales within service territories lacking these programs. DOE proposes requiring ETS control devices on the water heaters covered by the waiver, but this is a small incremental cost to an electric storage water heater compared to the alternative heat pump water heater meeting the Federal minimum efficiency standard. Clearly, an incentive exists for both manufacturers and consumers to cheat by selling lower-cost electric resistance storage water heaters to all consumers seeking storage capacities in excess of 55 gallons.

Furthermore, water heaters equipped with the envisioned controls for smart grid connection can be easily overridden and the water heater operated as a traditional electric storage water heater. Such water heaters might be sold into smart grid-capable service territories and never operated as part of an ETS program or into service territories where smart grid interconnection is not available. The first cost advantages to a consumer of installing such a water heater over the Federal minimum efficiency heat pump water heater clearly benefits this form of backsliding in efficiency.

Comments presented by General Electric (GE) opposing waivers of the new Federal minimum efficiency standard for this product as a "loophole that would erase ... consumer and national benefits achieved by the April 2010 standard" are correct and consistent with the technical analysis of the new minimum. It should be noted that GE could manufacture electric storage water heaters over 55 gallons in storage capacity to meet the limited ETS smart grid application market as well as its heat pump storage water heater products without significant threat to its heat pump product line but chooses to oppose the waivers in favor of continued support of the Federal minimum efficiency standard for this size range of electric storage water heaters, which have been shown to be "the maximum efficiency that is technologically feasible and economically justified" as required under 42 U.S.C. 6295(o)(2)(A). Technologically, the waiver would represent backsliding" in minimum efficiency of a covered product envisaged by "anti-backsliding" provisions of 42 U.S.C. 6295(o)(1).

The proposal for separate product class for "grid-interactive water heaters" allowing use of electric resistance heating for storage above 55 gallons is unnecessary based other available installation configurations. For example, consumers could install more than one federally-

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<sup>2</sup> *Energy Conservation Program: Energy Conservation Standards for Residential Water Heaters, Direct Heating Equipment, and Pool Heaters* 75 FR 20112 (April 16, 2010)

compliant, electric resistance storage water heaters in series to meet hot water storage requirements. ETS programs could recognize such installations and would not require taking issue with the new Federal minimum efficiency standards for larger water heaters. Also, a product minimum efficiency standard for a “grid-interactive water heater” does not control how it is installed and could lead to installation in areas where electronic control of the water heater is unavailable or unenforced, which would essentially end run the minimum efficiency standard.

Most importantly, if allowed, the proposed waiver should be restricted only to areas where there is no access to natural gas. Natural gas appliances are clean and efficient. If customers engaged in ETS programs switched to gas fired water heaters, the savings of electric energy use would be almost 100% not to mention the reduction in overall environmental impacts. APGA would be happy to supply DOE with greater information about full fuel cycle and the distinct energy efficiency benefits of natural gas fired water heaters over electric water heaters. The overall delivery system of natural gas, from extraction to production, through processing, transportations, and delivery to end use is approximately 92% efficient, compared to about 32% for electric appliances. Also, proposed waiver ignores important competitive issues for large gas storage water heaters, recalling that the new Federal minimum efficiency standard is justified based on condensing combustion technology, which is currently not available in storage water heaters design certified for residential installations. The allowance of large electric resistance water heater further disadvantages gas options, which are more expensive to purchase and install even before consideration of the likely higher incremental costs of condensing combustion models.

Lastly, establishing a separate product class in this instance exceeds the requirement for unique product utility (i.e., the heating and storage of domestic water) and would be inconsistent with DOE rejections of proposals for establishing a separate product class for residential furnaces based on venting limitations.

APGA thanks the Office of Energy Efficiency and Renewable Energy for its consideration of these comments.

Respectfully submitted,

A handwritten signature in blue ink that reads "Bert Kalisch". The signature is written in a cursive style.

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