

April 15. 2011

U.S. Department of Energy Mr. Daniel Cohen Assistant General Counsel for Legislation, Regulation and Energy Efficiency Office of the General Counsel 1000 Independence Avenue, SW Washington, DC 20585

Via Email: <u>Regulatory.Review@hq.doe.gov</u>

<u>Subject:</u> Reducing Regulatory Burden, Request for Information, <u>Federal Register</u> Vol. 76, No. 23, February 3, 2011

Dear Mr. Cohen:

The American Gas Association (AGA) appreciates the opportunity to respond to the subject Department of Energy ("the Department") Request for Information (RFI) seeking comment and information to assist it in reviewing its existing regulations to determine whether such regulations should be modified or repealed pursuant to Executive Order 13563 ("Improving Regulations and Regulatory Review," issued by President Obama on January 18, 2011). The American Gas Association represents 199 local energy companies committed to the safe delivery of clean natural gas to more than 64 million customers throughout the nation.

AGA's comments on the RFI pertain to the Department's rules and procedures authorized under 42 U.S.C. 6295, "Energy Conservation Standards" and rulemakings in establishing new and revising existing minimum energy efficiency standards for consumer products. AGA strongly supports the Department's efforts in this area of rulemaking, having consistently participated in rulemakings affecting gas-fired appliances and equipment by providing comments, data, and other information to the Departmental process. In recent years, beginning with the promulgation of the Process Improvement Rule in 1996,¹ AGA has documented many improvements in the technical and economic justification of new and revised minimum energy efficiency standards.

However, AGA has also observed specific regulatory failures in meeting the public interest of technologically feasible and economically justified energy efficiency standards and the need for changes in regulatory processes, which AGA believes is the primary focus of the RFI. AGA's comments and recommendation are related to specific instances of regulatory problems documented in the discussion to follow.

Retrospective Analysis

The RFI cites the objective of the Department to develop a preliminary plan for retrospective analysis of regulations. Retrospective analysis of specific minimum efficiency rulemakings is itself, an important consideration for the Department to explore since it provides important

¹ 10 CFR 430, <u>FR</u>, Vol. 61, No. 136, July 15, 1996, pp. 36974-36987.

feedback on the efficacy of the minimum efficiency standards program. AGA's own retrospective analysis of standards activities captures issues in a number of rulemakings proceedings. Three examples of these and associated issues are discussed.

<u>Residential Storage Water Heaters</u>. A review of the 2010 Final Rule for these products² shows that the minimum efficiency standard set for gas-fired water heaters above 55 gallons of hot water storage is based on efficiencies that are not attainable from currently available products designs certified for residential use. In this instance, the Department has set a minimum efficiency standard based on product designs that do not exist in the marketplace. Economic justification of this minimum efficiency is, therefore, based entirely upon hypothetical costs and returns on installed costs. Furthermore, the economic justification that was presented supporting this rule excluded important installation costs associated with safe venting requirements for the combustion technology that would have to be used in proposed designs of the water heaters. Specifically, the replacement of gas-fired water heaters above 55 gallons storage cannot be done with the technology required by the minimum efficiency standard because of different venting characteristics, the need for electrical power supply in installation often without electricity supply, and other installation-specific requirements.

This experience has been seen before, specifically in previous revisions to the standards for this product. From the Department's analysis in 2000 of the final minimum efficiency gas-fired storage water heater for the minimum efficiency final rule in 2001 to the analysis for the same water heater in 2008 for the 2010 final rule, estimated installed cost increased by 105%. At the same time, the competing electric storage water heater installed cost increased by only 16%. While the Department's 2008 costs are credible and now consistent with historical costs, the inflation in the cost estimates since 2000 reflects an incomplete understanding of manufacturer and installer issues in the earlier analysis and responses to the new minimum efficiency standards.

These installed cost differences, particularly across fuel types, have important unintended consequences. The Department predicted in 2000 the market shares of gas-fired storage water heaters and electric storage water heaters shown in the figure below and labeled as the "2000 TSD Forecast" trend lines. However, actual shipments of new storage water heaters are shown as the "Water Heater Data" trend lines. This outcome, particularly from 2003 to 2006 when the total market demand was consistent with historical levels, shows a dramatic departure from the Department's forecast. This change is consistent with the departure of installed costs from estimated costs for these competing products over the same period, discussed above.



² 10 CFR 430, <u>FR</u>, Vol. 75, No. 73, April 16, 2010, pp.20112-20236.

In fact, using simple source energy-based estimates of carbon dioxide emissions associated with direct emission from gas-fired water heaters and electric generation serving electric storage water heaters, another unintended consequence emerges. In the figure below, the "carbon footprint" in terms of source energy carbon dioxide emissions is estimated to have increased since promulgation of the 2001 final rule and the market shifts for these products. AGA invites the Department to conduct its own calculations of these effects. However, AGA believes that the Department's retrospective analysis of impacts of this rulemaking would similarly show this unintended consequence.



CO₂ FROM NEW SHIPMENTS OF RESIDENTIAL STORAGE WATER HEATERS

<u>Residential Gas Ranges and Cooktops</u>. In 2009, the Department issued a final rulemaking covering residential gas ranges and cooktops³ that prescriptively eliminated standing pilots on these products, even though the Department demonstrated a steady decline in the market share for products with standing pilot ignition. The direct consequence of this ban of pilot ignition systems in cooking products was effectively the elimination of cooking products that presented unique product utility, including products used in buildings without electrical service and building locations where electrical service is not readily available. Consumers affected by this ban include groups with religious and cultural practices that would prohibit use of products with the alternate ignition technology, electronic burner ignition. The Department's response to this issue was that these groups could use products equipped with battery-powered electronic ignition, but it provided no evidence that this equipment would be acceptable. Additionally, no residential cooking products served by battery-powered electronic ignition currently exist. The Department presumed that battery-powered systems used in automotive applications would be adapted, even though use of automotive batteries to routinely power residential appliances would be highly problematic.

The U. S. Department of Justice (DOJ) in its evaluation of the final rule and the banning of standing pilots provided the following opinion:

"Based on this review, we have determined that legitimate issues arise as to whether the proposed standards adversely effect [sic] competition and consumer choice with respect to (1) gas cooking products with standing pilot lights ..."

Nevertheless, the Department issued the final rule with the ban intact.

³ 10 CFR 430, <u>FR</u>, Vol. 74, No. 68, April 8, 2009, pp. 16040-16096.

<u>Decorative Hearth Products</u>. The final rule issued on 2010 covering residential water heaters also covered minimum efficiency standards to direct heating equipment, a "covered product" for energy efficiency rulemaking under 10 CFR 430.2. Direct heating equipment is "**designed** [emphasis added] to furnish warmed air to the living space of a residence." These products include both space heaters and some types of hearth products.

Gas fireplace heaters are design certified to ANSI Z21.88. In contrast, decorative hearth products include both gas log sets design certified to ANSI Standard Z21.60 and gas fireplaces design certified to ANSI Standard Z21.50. The former products are designed and tested to provide space heating; the latter products are designed solely for aesthetic purposes.

In its final rule, the Department refused to accept the ANSI standard categorizations that distinguish between hearth products designed as heaters and hearth products designed only to provide aesthetic benefits. Instead, the Department chose to limit energy input to decorative hearth products to an extremely low maximum input that effectively eliminates many products that depend upon higher input rates to achieve the aesthetic qualities of a fireplace. The Department reasoned that, independent of the design certification and purpose of the product, heating of the living space is occurring and the product is, therefore, a heater. The Department further reasoned that for all decorative hearth products:

"Since manufacturers provide consumers, installers, and contractor [sic] with a means to change the input capacity of the unit to better match consumers' aesthetic desires and heating needs, DOE believes input capacity is indicative of the type of intended use of the vented hearth **heater**." [emphasis added]

Here, the Department declares that decorative hearth products that are design certified for aesthetic purposes are also space heaters if the input rating is higher than a criterion it chose. In doing so, it ignored its own criterion for a product covered by the statutory authority to set efficiency standards: "designed to furnish warm air."

Design purpose and not perceptions of intended use or operation determine whether the product is covered by the Department's statutory authority to set minimum efficiency. Here, the Department exceeded its authority by setting requirements for a product for which it did not have statutory authority. In this rulemaking, the DOJ evaluation of the final rule strictly adhered to the list of covered products, remaining silent on decorative hearth products, and implying lack of jurisdictional authority over decorative hearth products. Unfortunately, the scope of DOJ's responsibilities on these rulemakings does not appear to extend to determinations of DOE's statutory authority to cover products.

Questions of the Department

AGA comments address several, but not all, of the Department's questions in the RFI.

<u>Question 1: How can the Department best promote periodic reviews of regulations and how can it best identify rules that might be modified, streamlined, expanded, or repealed?</u> Within the appliance efficiency program implemented by Building Technologies Program, Energy Efficiency and Renewable Energy, the Department should implement at the beginning of each rulemaking cycle for a covered product a retrospective review of the previous minimum efficiency standard

and predictions from the Technical Support Document (TSD). This retrospective analysis should evaluate impacts, unintended consequences, and prediction accuracy of:

- Market share forecasts
- Consumer and consumer subgroup life-cycle costs for the final minimum efficiency standard set
- Impact upon consumer utility and availability of products
- Per-consumer/unit source energy impacts in the near-term, transitioning to full fuel cycle (FFC) energy impacts as consensus on FFC energy analysis of building technologies develops within the Department
- Carbon emissions associated with per-consumer/unit impacts.

To implement these changes within a formal framework, the Department should propose modifications of the Process Improvement Rule.

<u>Question 5:</u> Is rule modification, strengthening, or changing approach justified? AGA advocates full implementation of the recommendations of the National Research Council (NRC) in its report, "Review of Site (Point-of-Use) and Full-Fuel-Cycle Measurement Approaches to DOE/EERE Building Appliance Energy-Efficiency Standards"⁴ and in particular, Recommendation 3, which is the near-term recommendation of the Committee on Point-of-Use and Full-Fuel-Cycle Measurement Approaches to Energy Efficiency Standards, which authored the report:

For appliances for which there is a choice of fuel, such as storage water heaters and heating equipment, efficiency ratings should be calculated using the extended site measure of energy consumption until DOE/EERE can consider and complete a transition to the use of the full-fuel-cycle measure of energy consumption.

The term "extended site" refers to source energy, which the Department already uses for its National Impact Analysis and Environmental Analysis sections of rulemaking TSDs. Source energy calculated efficiencies, presented for design options for consideration as minimum efficiencies and across competing fuels, would provide better comparisons of energy efficiency among the design options being considered for minimum efficiency standards and more credible information on the cost and potential emissions impacts from energy efficiency standards.

Question 9: Are there any regulations that fail to make a reasoned determination that its <u>benefits justify the costs?</u> As discussed for the residential gas ranges and cook tops and the decorative hearth product standards above, the procedures authorized by 42 U.S.C. 6295 have not demonstrated consistent reasoned determination of benefits, especially where products have been regulated out of the market and consumer utility has been ignored. These regulatory failures are strongly driven by ill-conceived or unjustified notions of consumer utility among Department staff. Perhaps more objective *a priori* definition of consumer utility within the Process Improvement Rule might guide staff to better decision making.

⁴ Committee on Point-of-Use and Full-Fuel-Cycle Measurement Approaches to Energy Efficiency Standards, National Research Council, "Review of Site (Point-of-Use) and Full-Fuel-Cycle Measurement Approaches to DOE/EERE Building Appliance Energy-Efficiency Standards" (May 15, 2009).

This concludes the comments of AGA. We look forward to continuing work with the Department and the appliance efficiency standards program.

Sincerely,

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