



Rinnai®

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Antitrust Division
U.S. Department of Justice
U.S. Department of Energy
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[SUBMITTED ELECTRONICALLY VIA EMAIL TO DOCKET ID: EERE-2017-BT-STD-0019]

Re: Energy Conservation Program: Energy Conservation Standards for Consumer Water Heaters {RIN 1904-AD91} {EERE-2017-BT-STD-0019}

To Whom It May Concern:

The National Propane Gas Association (NPGA), American Public Gas Association (APGA), Rinnai America Corporation, and American Gas Association (AGA) (collectively, Commenters) respectfully submit this letter in response to the Energy Conservation Program: Energy Conservation Standards for Consumer Water Heaters Notice of Proposed Rulemaking and Announcement of Public Meeting (NOPR) by the Department of Energy (DOE).¹ DOE published the NOPR to amend energy conservation standards for consumer water heaters, pursuant to the Energy Policy and Conservation Act.²

NPGA is the national trade association of the propane industry with a membership of about 2,400 companies, and 36 state and regional associations that represent members in all 50 states. Membership in NPGA includes retail marketers of propane gas who deliver the fuel to the end user, propane producers, transporters and wholesalers, and manufacturers and distributors of equipment, containers, and appliances. Propane gas fuels millions of installations nationwide for home and commercial heating and cooking, in agriculture, industrial processing, and as a clean air alternative engine fuel for both over-the-road vehicles and industrial lift trucks. Roughly 75% of NPGA's members have fewer than 100 employees, and are considered small businesses.

APGA is the trade association representing more than 730 communities across the U.S. that own and operate their retail natural gas distribution entities. These include not-for-profit gas distribution systems owned by municipalities and other local government entities, all accountable to the citizens they serve. Public gas systems focus on providing safe, reliable, and affordable energy to their customers and support their communities by delivering fuel to be used for cooking, clothes drying, and space and water heating, as well as for various commercial and industrial applications, including electricity generation.³

¹ Energy Conservation Program: Energy Conservation Standards for Consumer Water Heaters; Notice of Proposed Rulemaking and Announcement of Public Meeting, 88 Fed. Reg. 49058 (Jul. 28, 2023) (hereinafter, "NOPR").

² NOPR at 49058.

³ For more information, please visit www.apga.org.

AGA, founded in 1918, represents more than 200 local energy companies that deliver clean natural gas throughout the United States. There are more than 77 million residential, commercial and industrial natural gas customers in the U.S., of which 96 percent — more than 74 million customers — receive their gas from AGA members. Today, natural gas meets more than one-third of the United States' energy needs.

Rinnai America Corporation (Rinnai) is the leading manufacturer of tankless water heaters in the United States. Over its 100-year history, Rinnai has demonstrated a commitment to quality, safety, and customer support. Rinnai is the first and only gas tankless brand to have a manufacturing facility in the United States with advanced automation and precision assembly processes. All Rinnai factories are ISO 9001 and/or ISO 14001 certified. As the leading manufacturer of tankless gas water heaters, the proposed rule has a direct impact on Rinnai's products, facilities, and investments.

The NOPR directly addresses products which currently and, in the future, may rely on propane or natural gas as fuel for consumer water heaters, and as such, the NOPR has the potential to have a direct and significant impact on Commenters' memberships.

The NOPR states that "EPCA requires the Attorney General to provide DOE a written determination of whether the proposed standard is likely to lessen competition."⁴ The NOPR continues by seeking information on "the likely competitive impact of the proposed standard."⁵

The Department must clearly understand that if the proposal is adopted, consumers will have less choice because an entire class of products will be removed from the market place. Thus, the proposal is anticompetitive at its core. These comments explain further.

Standards and Results in the NOPR

The NOPR proposes a uniform energy factor (UEF) of 0.59 for low-draw gas-fired storage water heaters (GSWH), 0.64 for medium-draw GSWHs, and 0.68 for high-draw GSWHs, all with capacities between twenty and fifty-five gallons.⁶ The NOPR also proposes a UEF of 0.91 for medium-draw gas-fired instantaneous water heaters (GIWH), and 0.93 for high-draw GIWHs, both with capacities less than two gallons and utilizing more than fifty thousand British thermal units per hour (Btu/h).⁷ The UEF requirement for GIWHs would require condensing technology.⁸ The UEF requirement for GSWHs would require new venting requirements and other additional equipment.⁹

Market and Competition Effects

On a fundamental level, DOE fails to understand the market for water heaters and what differentiates consumer decisions. This is apparent from its discussion of product classes.¹⁰ An important distinction

⁴ NOPR at 49058.

⁵ *Id.*

⁶ NOPR at 49113.

⁷ *Id.* at 49114.

⁸ NOPR at 49119, 49159.

⁹ NOPR at 49108.

¹⁰ NOPR at 49079 ("DOE shall establish separate product classes for a covered product based on: (1) fuel source; and (2) whether a type of product offers a unique capacity or other performance-related feature that justifies a different standard ("non-condensing technology does not constitute a performance-related "feature" that provides a distinct utility to consumers as prescribed by EPCA at 42 U.S.C. 6295(q)(1).").

among water heaters on the market is that some are condensing and some are not condensing. Condensing appliances require distinctive venting and more space. Non-condensing appliances usually vent with a furnace. This difference significantly impacts cost, insulation, and operations.

Yet DOE continues to strain to show that the consumer gains no utility from such features. Certain consumers may only be able to use atmospheric venting in their residences, and may not be able to change to a separate venting system. DOE's errant philosophy is that the consumer's decision-making is limited to turning on a faucet upstairs with no consideration of the actual operation of the appliance downstairs. It insists that the design and operation of the unit "does not provide any utility to the consumer that is accessible to the layperson, which is based upon the consumer's operation of or interaction with the appliance."¹¹ Yet design and installation issues certainly are accessible to the consumer when choosing what appliance to purchase. DOE's failure to separate product classes based on relevant features preferred by consumers shows a fundamental market misunderstanding, questioning their capacity to regulate the market.

DOE also fails to understand consumers of water heaters in another way. DOE has maintained its misunderstanding of the market by claiming that consumers do not make choices in the market based on rational economic terms.¹² While DOE may believe that consumers may have conflicting rationales for their choices, it concedes that many water heater decisions are made in emergencies, where price and immediate availability are the strongest factors in decision-making.¹³ DOE uses this analysis to reject the idea that consumers would switch products ACROSS various product classes,¹⁴ deciding at the outset to simply not evaluate market shifts by relying on its erroneous assumptions. DOE fails to understand that by limiting or eliminating the market for non-condensing instantaneous water heaters, consumers may choose to switch to a non-condensing GSWH, thereby resulting in a lower UEF and enhanced emissions from their consumer water heater. Further, DOE has not accounted for the installation costs of this potential product class switch in its proposed rule.

DOE's proposed standard will have a significant market effect, as evidenced within the proposed rule itself. Manufacturers noted the significant technological changes associated with this rulemaking, especially in requiring condensing technology and challenges in production.¹⁵ Manufacturers also noted the need for very high investment levels in a short period of time in order to comply with this rulemaking.¹⁶ It is more likely that producers will choose to leave the market, rather than expend the millions of dollars it will take to redesign their products and production in order to be in compliance with the proposed standards.

In the NOPR, DOE notes that production of electric heat pumps would need to increase substantially, at a level of three to four million additional heat pumps per year.¹⁷ However, DOE implies that this heat pump production would be electric heat pumps, as it earlier finds that gas-fired heat pumps are not available at scale.¹⁸ Consequently, DOE is seeking to promote the market for electric heat pumps at the expense of gas-fired water heaters, diminishing competition and profoundly affecting consumer choice.

¹¹ NOPR at 49079. *See id.* ("non-condensing technology does not constitute a performance-related "feature" that provides a distinct utility to consumers as prescribed by EPCA at 42 U.S.C. 6295(q)(1).").

¹² NOPR at 49114.

¹³ NOPR at 49116, 49119.

¹⁴ NOPR at 49118-119.

¹⁵ NOPR at 49128.

¹⁶ *Id.*

¹⁷ NOPR at 49147.

¹⁸ NOPR at 49084.

DOE's efforts will promote additional demand for electricity for water heaters at a time when the electric grid is suffering from a reliability crisis. The North American Electric Reliability Corporation's most recent long-term reliability assessment shows more than 50% of the United States is in high risk or elevated risk of shortfalls in electricity supply.¹⁹ This assessment is based on existing demand and shows that the grid needs significant improvements to meet rising demand, and extreme conditions. Specifically, the Assessment calls on industry and policymakers to "consider the impact that electrification of transportation, space heating, and other sectors may have on future electricity demand and infrastructure."²⁰ DOE has failed to present its consideration of the impact of its proposal on grid reliability, and consequently, failed to answer any questions about such necessary analysis. Prior to adding additional demand, DOE should heed the guidance of the Government Accountability Office and analyze options for grid resilience, so as to avoid enhanced strain without a demand management or supply plan.²¹ Further, the DOE would benefit particularly by reviewing analysis of grid strain during extreme weather events, which have called for enhanced storage, transmission, and generation enhancement of 35-70 gigawatts of power.²² DOE's market-making and market-manipulating efforts could lead to grid failure, by exacerbating grid strain, risking consumer blackouts and brownouts.

DOE's proposed regulation would be an enormous burden on manufacturing and on competition. A rule with, by its own estimates, \$2,235,000 in costs²³ that fails to meet EPCA's three-year rebuttable presumption of economic justification under pure economic terms.²⁴ DOE concedes that it is creating an enhanced market for heat pumps, noting that heat pump production for electric storage water heaters will go from 5% of electric storage water heaters to 63% in 2030.²⁵ The consequences of DOE's proposed rule are an impermissible burden on the water heater market, and diminishes competition between gas and electric water heaters.

Fuel Switching

As mentioned prior, DOE did not account for fuel switching in the market. Commenters noted that DOE failed to address consumer choice and failed to account for consumers making choices based on rational economic terms.²⁶ DOE responded, without support or analysis, that economic measures such as life-cycle costs or simple payback period most likely would not fully and accurately reflect actual real-world installations.²⁷ DOE's claim in this regard is arbitrary, capricious, and without foundation. Instead of referencing actual interviews or studies, DOE pivots to a cherry-picked library of behavioral economics papers that have no bearing or relevance to water heaters or the proposed rule.²⁸ DOE's effort at distraction from its dearth of evidence shows its failure to support its regarding consumer choice and fuel switching.

¹⁹ 2022 Long-Term Reliability Assessment, North American Electric Reliability Corporation, [2022_LTRA \(nerc.com\)](https://www.nerc.com) at 5-7, 23. (last accessed June 21, 2023).

²⁰ *Id.*

²¹ [GAO-21-346, Accessible Version, ELECTRICITY GRID RESILIENCE: Climate Change Is Expected to Have Far-reaching Effects and DOE and FERC Should Take Actions](#) (last accessed June 21, 2023).

²² Hopkins, Asa, Takahashi, Kenji and Nadel, Steven; *Keep Warm and Carry On: Electrification and Efficiency Meet the Polar Vortex*, American Council for an Energy-Efficient Economy at 11-12 (2020).

²³ NOPR at 49162.

²⁴ NOPR at 49073 (noting the payback period) and 49153 (claiming that the rule would be justified without monetizing the reduction in greenhouse gas emissions).

²⁵ NOPR at 49160.

²⁶ NOPR at 49114.

²⁷ NOPR at 49115.

²⁸ NOPR at 49116.

DOE later concedes that it would be cost-prohibitive to switch product classes,²⁹ but fails to address the installation costs of switching in the proposed rule. Instead, DOE makes an assumption about product-switching, then reinforced its assumption without analysis. DOE completely ignores the possibility that consumers may want to switch classes based on the proposed rule, but product classes may not be available for such switching. Further, based on its baseless assumption, DOE conveniently omits any installation costs in its Lifecycle Costs and Payback Period analysis. DOE's failure to include analysis of product and fuel-switching or associated costs and product availability shows its market analysis is inherently flawed, and must be re-evaluated.

Small Business Effects

The proposed rule also fails to comply with Executive Order 13272, "Proper Consideration of Small Entities in Agency Rulemaking."³⁰ DOE identified 22 original equipment manufacturers (OEMs)³¹, of which, it only found 2 that satisfied the criteria to be considered small businesses.³² Further, neither of the small businesses which qualified produced gas-fired water heaters.³³ Based on its analysis, and the results of its interviews, DOE has no idea what the effect on small businesses who manufacture gas-fired water heaters. DOE has no data on their redesign costs, product availability, or whether or not the proposed efficiency levels will force these manufacturers to leave the market. DOE's failure to properly identify affected parties is a glaring informational liability in the rule, and must be addressed pursuant to Executive Order 13272.

Conclusion

Thank you for your attention to our concerns, and please contact us with any questions.

Sincerely,



Benjamin Nussdorf
Vice President, Regulatory & Industry Affairs
National Propane Gas Association



Stuart Saulters
Vice President of Government Relations
American Public Gas Association

²⁹ NOPR at 49119.

³⁰ 67 Fed. Reg. 53461 (Aug. 16, 2002).

³¹ This acronym is used, but not defined in the proposed rule.

³² NOPR at 49169.

³³ *Id.*

A handwritten signature in black ink, appearing to read "Matthew J. Agen".

Matthew J. Agen
Chief Regulatory Counsel, Energy
American Gas Association

A handwritten signature in blue ink, appearing to read "Perry McGuire".

Perry McGuire
Vice President and General Counsel
Rinnai America Corporation