Rinnai®

August 28, 2023

U. S. Department of Justice
Antitrust Division
950 Pennsylvania Avenue, NW
Washington, DC 20530

Re: Comments of Rinnai America Corporation on "Notice of Proposed Rulemaking and Announcement of Public Meeting," U. S. Department of Energy, "Energy Conservation Program: Energy Conservation Standard for Consumer Water Heaters," EERE-2017-BT-STD-0019 (RIN 1904-AD9), Federal Register Vol. 88, No. 144, Friday, July 28, 2023, pp. 49058-49177.

Sir/Madam:

Rinnai America Corporation (Rinnai) respectfully submits the following comments to the Department of Justice for the U. S. Department of Energy's proposed modifications to minimum energy efficiency standards for consumer water heaters.

Rinnai America Corporation is the U. S. based subsidiary of Rinnai Corporation, Nagoya, Japan, and is part of the over 100-year-old Rinnai Group. Rinnai is the #1 tankless (instantaneous) gas water heater provider in North America. Rinnai has its headquarters in Peachtree City, GA and recently opened the first gas tankless water heater manufacturing facility in the United States, a 300,000 square foot manufacturing facility in Griffin, GA. Rinnai's new facility employs advanced automation, precision assembly processes, and is ISO 9001 and/or ISO 14001 certified. Rinnai America is committed to its brand promise – "Creating a healthier way of living." The Rinnai Innovation Manifesto (RIM 2050) is focused on ensuring "we achieve our sustainability goals including 2030 'low-carbon targets' and decarbonization by 2050". Rinnai's comments herein on the Department of Energy's proposed energy conservation standards for consumer water heaters (Docket No. EERE–2017–BT–STD–0019) align with supporting RIM 2050 and the goal of net-zero economy-wide greenhouse gas emissions.

The Department of Justice (DOJ) is required to determine the effects on competition for new or amended energy conservation standards for "covered products" under the Energy Policy and Conservation Act (EPCA). EPCA Section 6295(o)(2)(B)(i)(V) requires the Department of Energy (DOE) to consider among other effects:

> (V) the impact of any lessening of competition, as determined in writing by the Attorney General, that is likely to result from the imposition of the standard . . .

The DOJ thus has the responsibility of making this determination in writing for the DOE. The DOJ has elaborated on the standard it applies:

> In conducting its analysis, the Antitrust Division examines whether a proposed standard may lessen competition, for example, by substantially limiting consumer choice, by placing certain manufacturers at an unjustified competitive disadvantage, or by inducing avoidable inefficiencies in production or distribution of particular products. A lessening of competition could result in higher prices to manufacturers and consumers, and perhaps thwart the intent of the revised standards by inducing substitution to less efficient products.[1]

DOJ has also stated that it will consider "whether a proposed standard may lessen competition . . . by . . . increasing industry concentration."[2]

Rinnai in this letter is providing comments and information for consideration by DOJ in making the required determination as to the effects on competition.

COMMENTS

There are two types of tankless gas water heaters: non-condensing and condensing. The non-condensing cost less and are less efficient; the condensing cost more and are more efficient. Both are far more efficient than tank (or storage) gas water heaters, and both cost more. Despite the higher price tag, tankless gas water heaters have been making inroads into the gas storage water heater market – resulting in greater efficiency and reduced emissions. The non-condensing type of tankless gas water heater has some advantages in this competition: its price is close to that of storage water heaters, it uses less space, it lasts longer, it is often easy to install, and it delivers unlimited hot water.

The DOE's **existing** minimum efficiency standard for tankless gas water heaters allows for both non-condensing and condensing gas water heaters; it is set in effect at the level of non-condensing efficiency. The DOE's **proposed** minimum efficiency standard for tankless gas water heaters shifts the efficiency level sharply upward, to the level of condensing efficiency. The DOE uses only a single product category for non-condensing and condensing tankless gas water heaters. Thus, this new proposed standard effectively eliminates non-condensing tankless water heaters, which provide a less costly and more efficient solution for the consumer, because it is not technologically feasible.

The DOE's proposed rule would lessen competition in the market for water heater products – the rule will reduce consumer choice, raise prices for efficient appliances, and reduce overall efficiency across the water heater market, thereby increasing emissions. The rule will have two related impacts: First, Rinnai itself will be hampered in its ability to compete in the market for gas

[1] "Publication of determination.", U.S. Department of Energy, "Energy Conservation Program: Energy Conservation Standards for Commercial Refrigeration Equipment," 80 Fed. Reg. 44892 (Jul. 28, 2015).

[2] "Publication of determination.", U.S. Department of Energy, "Energy Conservation Program: Energy Conservation Standards for Residential Dehumidifiers," 81 Fed. Reg. 55155 (Aug. 18, 2016)

water heaters and will have to expend a considerable amount of dollars to repurpose its brand-new manufacturing facility – the only one in the U.S. for gas non-condensing tankless water heaters. That new facility makes only non-condensing tankless gas water heaters – the type the proposed rule precludes. Second, the exclusion of non-condensing tankless water heaters from the market will result in increasing market concentration among the few large participants as the bulk of Rinnai's customers for non-condensing tankless water heaters will shift to storage water heaters as the less expensive option. The water heater market is dominated by three large players, and this shift will benefit two of those players at the expense of Rinnai, a much smaller competitor that has been making inroads into the market by providing consumers with additional choices.

Background:

Historically, the consumer water heater market in the United States has been dominated by storage water heaters in which water is heated in a tank. Such gas storage water heaters are the least expensive on the market, but they are also the least efficient. As a result, in recent years "instantaneous" or "tankless" water heaters have experienced a growth in market share, driven by their improved performance and superior efficiency (resulting in lower utility costs), despite their generally higher price tag.

Figure 1 below shows the market share of gas tankless, gas storage and electric storage water heaters relative to the total water heating market over the past decade. As can be seen, gas tankless water heating market share has demonstrated significant growth, increasing from 4% in 2012 to 10% market share in 2022, storage water heater market share remained flat over the same period. With its higher efficiency, declining Year-Over-Year (YOY) Total Cost of Ownership, high quality, and superior performance, gas tankless water heaters are gaining attraction in the market and becoming the preferred choice of the consumer.

<u>Figure 1</u> (Gas tankless, gas storage and electric water heating market share 2012 – 2022):

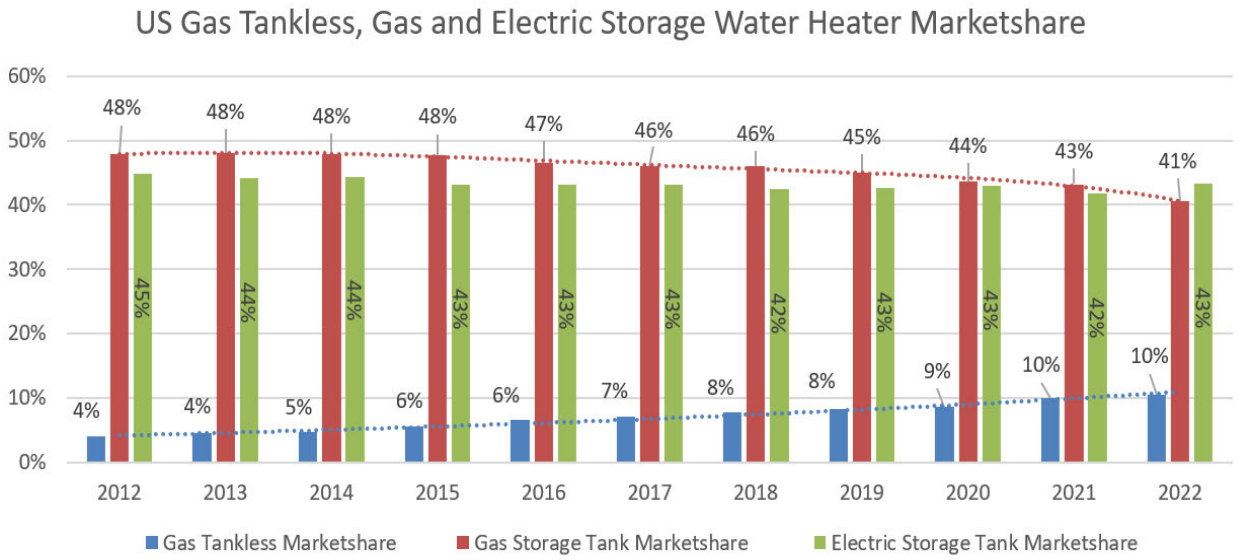
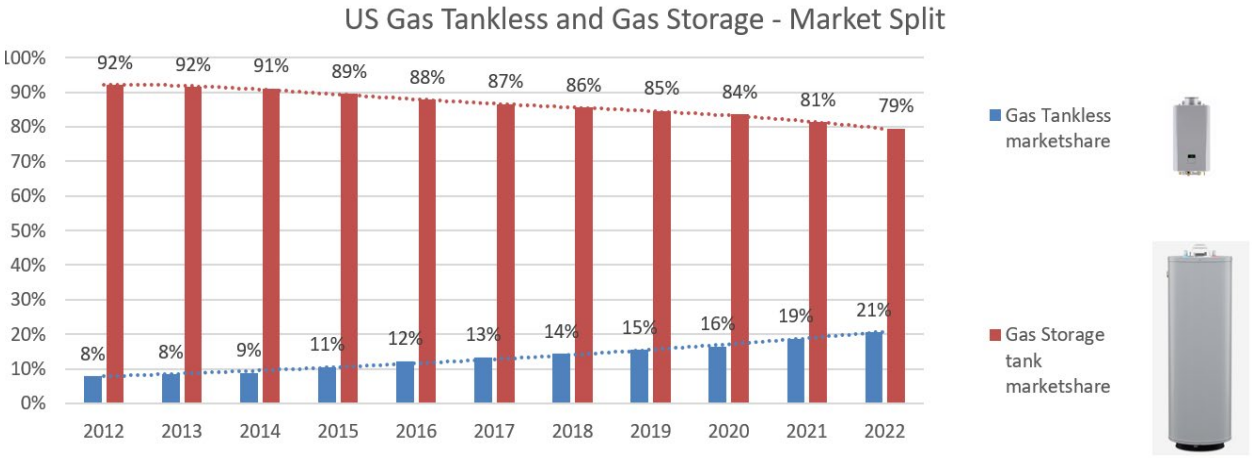


Figure 2 below further shows the market split between gas tankless and gas storage water heaters. It reflects a substantial decline in the gas storage water heating market, dropping from 92% to 79% between 2012 and 2022. Gas tankless water heaters, on the other hand, gained significant market share and increased from 8% to 21%, mainly by replacing less efficient gas storage water heaters.

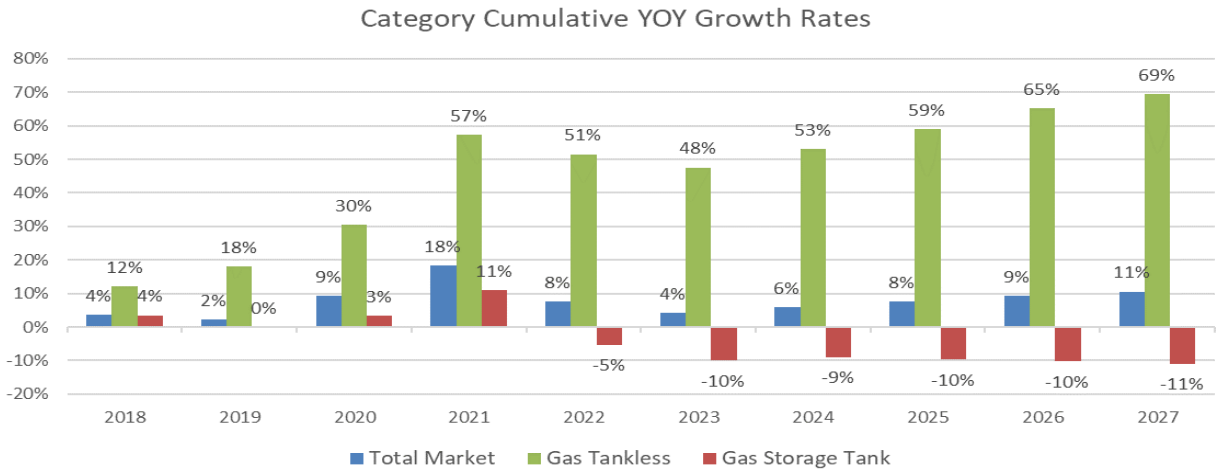
Figure 2: (Gas tankless and gas storage water heating market share 2012-2022):[3]



Furthermore, under the DOE's existing energy efficiency standards, the gas tankless water heater market is expected to grow and to reach 12% in 2027 across the entire water heating market, confirming its benefits and the preference by many consumers. As shown in Figure 3 below, Rinnai's market predictions are that gas tankless water heaters will continue to experience year-over-year growth rates in market share, while gas storage water heaters will see negative growth– even while the overall market is projected to have positive growth.

[3] 2023 BRG Report.

Figure 3: (**Predicted cumulative growth rates through 2027 under existing rules):**[4]



As for tankless water heaters in particular, they can be either gas or electric powered, and gas tankless water heaters can be either "condensing" or "non-condensing." Four key differences between the condensing and non-condensing gas tankless technologies are cost, efficiency, venting, and condensate requirements. Generally, condensing tankless water heaters are more efficient but more expensive; they also require additional condensate drainage or a condensate pump to manage the condensate produced, which results in different installation requirements that are often more expensive. Non-condensing tankless water heaters, on the other hand, cost less and do not require a condensate drain or a condensate pump. While less efficient than condensing tankless water heaters, non-condensing tankless water heaters are still dramatically more efficient than storage water heaters while being only modestly more expensive, and thus they are preferred by many builders, installers and distributors and are the product of choice for consumers in the replacement market. In short, non-condensing tankless water heaters are a better alternative to storage gas water heaters for many consumers.

The two types of gas tankless water heaters thus have different features, installation requirements, and pricing, and serve different construction markets and needs. The non-condensing tankless gas water heaters are a great option compared to storage water heaters given the space saving they bring to homes while adding to the energy savings, given their higher efficiency compared to storage water heaters. And for many consumers facing urgent replacement, the non-condensing tankless is a cost-effective alternative with relative ease of installation, whereas the condensing tankless may be cost prohibitive and may not be compatible with the existing infrastructure. Given the market dynamics in the water heating category and the rapid growth rates for gas tankless water heaters in the U.S., Rinnai made strategic investments and built a new manufacturing facility in Griffin, GA, specifically for non-condensing tankless gas water heaters. This allows Rinnai to offer highly efficient and more affordable tankless water heaters to the consumer as a choice for replacing less efficient storage water heaters.

[4] 2023 BRG Report.

The different average efficiency levels and price range for storage, non-condensing tankless, and condensing tankless gas water heaters are as follows:

Table 1 (average efficiencies and product prices for types of gas water heaters): [5]

Product Class	Efficiency Level	Average Retail Price
Gas storage water heaters (non-condensing)	54% - 63%	$580
Gas-fired tankless hot water heaters (non-condensing)	81%	$1056
Gas-fired tankless hot water heaters (condensing)	91%-93%	$1509

DOE's existing minimum efficiency standards treat many types of electric, gas, storage, and tankless water heaters differently. But DOE's rules do not differentiate between non-condensing and condensing tankless water heaters, despite their technological differences and the impact that has on sales, pricing, and market installation.[6] The existing federal minimum efficiency standards set the baseline efficiency level (or UEF) for *all* gas tankless water heaters at 81%, effectively at the level of *non-condensing* tankless water heaters.

DOE's proposed minimum efficiency standards continue to treat electric, gas, storage, and tankless water heaters differently. For example, under DOE's proposed rules, storage gas water heaters would still have a much lower minimum efficiency level than tankless gas water heaters, and while the baseline efficiency level for storage gas water heaters increases slightly, it is not a substantial change. The DOE's proposed rule, however, sharply increases the baseline efficiency level for *all* gas tankless water heaters to 91% /93%, effectively setting the UEF at the level of *condensing* tankless water heaters. This proposed new standard for tankless gas water heaters is only achievable by condensing tankless gas water heaters, and it will make all non-condensing tankless gas water heaters obsolete immediately, excluding them from the market. The change in the UEF standards is illustrated in Table 2.

[5] Pricing data is taken from homedepot.com; average efficiency levels are based on EERE–2017–BT–STD–0019.

[6] Code of Federal Regulations, Title 10, Chapter 2, Subchapter D, Part 430, Subpart C

Table 2 (change from DOE existing standard to DOE proposed standard):

Product Class	Current Baseline Efficiency Level	Proposed Baseline Efficiency Level
Storage Gas Water Heater*	54%-63%	59%-68%
Technology That Can Achieve	Non-Condensing Condensing	Non-Condensing Condensing
Tankless (Instantaneous) Gas Water Heater	81%	91%-93%
Technology That Can Achieve	Non-Condensing Condensing	Condensing

*For gas-fired storage water heater efficiency band leverages 28, 38, and 48 gallon storage capacity for respective draw pattern

Accordingly, DOE's proposed rule would effectively ban non-condensing tankless gas water heaters while allowing less efficient storage gas water heaters **or** more efficient but also more expensive condensing tankless gas water heaters.

This effective ban creates a number of detrimental effects on competition by limiting consumer choice, raising prices on more efficient products, eliminating consumers' option to make like-for-like product replacements, and putting Rinnai at an unjustified disadvantage as a much smaller competitor in the concentrated water heater market. The proposed standards DOE is pursuing were recommended by two of the largest manufacturers of water heaters, [redacted] and [redacted], in an Oct. 21, 2022 Letter to DOE, at 2.[7] The consumer water heater market is already concentrated, with just three firms ([redacted]) having a dominant market share. Rinnai, while a growing competitor, has a market share of less than 5% of the consumer water heater market (by shipments), and only offers tankless gas water heaters, not storage gas water heaters. Rinnai has made inroads into the storage water heater market over the past decade, gradually increasing the percentage of tankless gas water heaters by replacing gas storage water heaters with its more efficient products. Most hot water heater replacements and new construction installations prefer to use non-condensing tankless water heaters due to relatively lower cost and smaller footprint. For consumers *replacing* gas water heaters in particular, under the DOE's proposed rule, they will be forced to choose between low-cost storage water heaters and expensive condensing tankless gas water heaters – and most consumers choose the low-cost option. As a result, by eliminating non-condensing tankless gas water heaters from the market,

[7] EERE–2017–BT–STD–0019 0049, [redacted].

DOE's proposed rule will hamper Rinnai's ability to compete and is most likely to shift the market toward storage gas water heaters, to the benefit of dominant companies [redacted].

The proposed rule may also thwart the purpose of DOE's amendments by leading to the increased use of less efficient storage gas water heaters, and therefore greater emissions overall.

Specific Impacts of the Proposed Rule:

The following describes more specifically impacts from DOE's proposed minimum efficiency standards.

1. A clear consequence of eliminating non-condensing tankless gas water heaters is the loss of a band of products providing significantly increased efficiency over storage gas water heaters at only a modestly increased price – i.e., the DOE's proposed rules have a storage gas water heater baseline efficiency of 59% to 68% (with current efficiency 54% to 63%), while the current tankless gas water heater baseline efficiency is 81%. That 81% option will disappear with DOE's proposed baseline efficiency for <u>all</u> tankless gas water heaters of 91%-93%, which only allows for condensing tankless gas water heaters, a higher priced option. This will limit the available product (and installation) options and consumer choice.

Rinnai's non-condensing tankless gas water heaters – the only tankless gas water heaters manufactured in the U.S. – in fact generally exceed the current baseline efficiency standard of 81% for tankless gas water heaters with a UEF rating of 0.82 on most models. This presents efficiency performance well above competing storage gas water heater minimum efficiencies under either the current or proposed rules.

2. The loss of the intermediate efficiency and pricing, along with relative ease of installation, presented by non-condensing tankless gas water heaters would impose a substantial economic impact on consumers considering installing available tankless water heaters. Rinnai's estimate of incremental retail price of condensing gas water heaters is between $450 to $600 per unit higher than for non-condensing water heaters.[8] Consumers incur additional installation costs for condensate management which is not required for non-condensing tankless water heaters.[9]

[8] EERE–2017–BT–STD–0019_0049, American Council for an Energy-Efficient Economy Appliance Standards Awareness Project. Bradford White Corporation, Consumer Federation of America, Natural Resources Defense Council, Northwest Energy Efficiency Alliance, Rheem Manufacturing.

[9] For purposes of comparison, there is data available for furnaces that are condensing versus non-condensing. *See* "Comments of American Gas Association: Energy Conservation Program: Conservation Standards for Residential Energy Furnaces and Residential Central Air Conditioners and Heat Pumps," Attachment A, EERE-2011-BT-STD-0011/RIN 1904-AC06, October 12, 2011. Cost adder data, collected across American Gas Association U. S. member utilities, covers cost adders for residential non-

DOE's Technical Support Document severely underestimates the installed cost differential between non-condensing and condensing residential water heaters given that the product price of a condensing tankless water heater is about $450 (Table 1) higher than non-condensing tankless water heaters.[10] The elimination of the non-condensing option will further increase the price gap between a gas (condensing) tankless and a gas storage water heater. Rinnai will address the accuracy of installed costs more directly in its comments to DOE, but as relevant to DOJ's determination, the importance is that the cost disparity is an essential and demonstrated motivation for homeowners to choose lower efficiency storage gas water heaters instead of condensing tankless gas water heaters, particularly in the replacement market. DOE's proposed rule removes the more moderately priced, non-condensing tankless gas water heaters from the market, forcing a choice between the low-price storage water heater and the high price condensing tankless model, which may not be physically compatible with all spaces. The obvious result will be that most consumers in the replacement market will switch, not to condensing tankless water heaters, but rather to less-efficient gas storage water heaters.

3. In short, the impact of DOE's proposed rule on the water heater market will be to induce a shift toward storage gas water heaters, reducing the expected growth of tankless gas water heaters. For the reasons explained above, Rinnai projects that if the DOE proposed rule goes into effect, a significant proportion (80%-100%) of sales of non-condensing tankless gas water heaters will shift to sales of storage gas water heaters. While condensing tankless water heaters will continue to be used in some situations, they are not likely to replace most sales of non-condensing tankless water heaters given their significantly higher cost and installation considerations.

Rinnai has examined water heater shipment data from a variety of sources to evaluate the impact of the shift in sales of non-condensing tankless gas water heaters to storage gas water heaters. This is shown in Table 3 and Figure 4 below for scenarios in which 100%, 90% or 80% of the current non-condensing tankless sales shift to storage gas water heaters (with the remainder 0%, 10%, or 20% shifting to condensing tankless water heaters). As can be seen in Table 3, a complete shift represents a loss of the 37% savings in environmental impact in the form of energy use and carbon dioxide emissions as well as consumer life-cycle costs as compared to a scenario where non-condensing tankless gas water heaters remain on the market. For cases where only 90% and 80% substitution of storage gas water heaters occurs, there are still substantial lost energy

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weatherized condensing central furnace and excludes costs specifically applicable to furnace systems, which includes relining existing chimneys and venting modification to accommodate common venting commonly required for furnace replacements code requirements for proper vent sizing. Other condensing appliance installation cost adders covering condensate collection and removal, condensate freeze protection, and structural modification to accommodate venting are common to both furnaces and water heaters where condensing appliances serve as replacements or substitutes to non-condensing appliances and total to between $900 and $1,200 per installation.

[10] EERE–2017–BT–STD–0019_0049, American Council for an Energy-Efficient Economy Appliance Standards Awareness Project. Bradford White Corporation, Consumer Federation of America, Natural Resources Defense Council, Northwest Energy Efficiency Alliance, Rheem Manufacturing

savings, carbon dioxide emissions reductions, and financial savings. Rinnai presents these alternative scenarios as a conservative measure of potential impacts.

Table 3 (impact of shift to storage / tank water heaters on lifetime cost savings, energy savings, and emissions savings from 2005 - 2050):

	% Allocation of NC TWH to Storage WH or CD TWH					
	100% Tank - 0% CD TWH		90% Tank - 10% CD TWH		80% Tank - 20% CD TWH	
	Total Saving Losses	% Loss	Total Saving Losses	% Loss	Total Saving Losses	% Loss
Lost Cost Saving ($) By Eliminating NC TWH	$554,066,897	37%	$477,619,897	32%	$401,172,897	27%
Lost Energy Saving By Eliminating NC TWH (MMBtu)	299,196,043	37%	286,220,964	35%	273,245,885	34%
Lost CO_2 Saving By Eliminating NC TWH (lbs)	33,325,808,040	37%	31,833,211,788	35%	30,340,615,536	34%

Compared to EL-02 Storage Water Heaters, non-condensing TWH have saved the consumer between 2005 to 2030:

Lifetime Cost Savings ($):	$947,159,048
Energy Savings (MMBtu):	511,465,748
CO_2 Savings (lbs):	56,969,367,458

If not eliminated, non-condensing TWH will contribute to additional savings between 2030 to 2050:

Lifetime Cost Savings ($):	$554,066,897
Energy Savings (MMBtu):	299,196,043
CO_2 Savings (lbs):	33,325,808,040

Baseline: Non-condensing TWH Continue to Remain in Market - Total Savings 2005-2050

Lifetime Cost Savings ($):	$1,501,225,945
Energy Savings (MMBtu):	810,661,792
CO_2 Savings (lbs):	90,295,175,498

Key Takeaways

Keeping non-condensing TWHs provides the best savings to the consumer

Even going from 100% tank to 80% tank/20% condensing TWH has minimal impact on energy and CO_2 savings

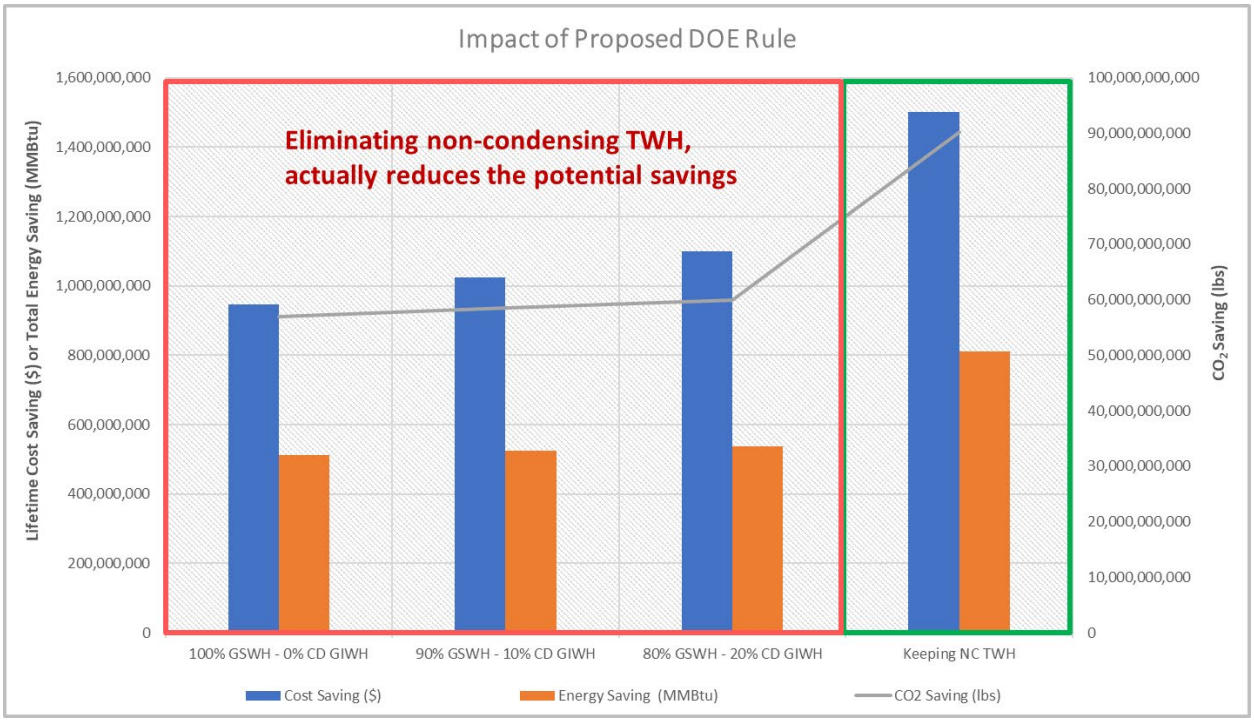
Keeping non-condensing TWHs can provide 27%-37% in cost savings to the consumer

Keeping non-condensing TWHs can provide 34%-37% in energy savings to the consumer

Keeping non-condensing TWHs can provide 34%-37% in CO_2 reduction

Estimated volumes leveraging modified version of 2023 BRG report
Energy use and cost data leveraging Federal Register EERE-2017-BT-STD-0019 and Technical Support Document (TSD) EERE-2017-BT-STD-0019-0058

Figure 4 (comparison of impact on lifetime cost savings, energy savings, and emissions of existing and proposed DOE standards):



As Table 3 and Figure 4 show, eliminating non-condensing tankless gas water heaters will result in lost energy use savings, emissions reductions, and cost savings over the next decades. Thus, DOE's proposed rule will "thwart the intent of the revised standards by inducing substitution to less efficient products" and increasing emissions.[11] Moreover, this will result in the suppression of competition from tankless gas water heaters in general and increase market concentration while denying consumers valuable product options.

4. The impact of the proposed rules on the concentrated water heater market raises anticompetitive concerns. As noted above, three large players dominate the market, and Rinnai is a much smaller competitor offering more efficient, higher technology products that have gradually been making inroads into the gas storage water heater market. As can be seen in Figure 2 above, in 2012, tankless water heaters were only 8% of the gas water heater market, and in 2022 they were 21%. Rinnai does not offer gas storage water heaters in the residential market; it only offers tankless water heaters. And as to tankless water heaters, it only manufactures the non-condensing tankless in the U.S. As explained more below, Rinnai must import its condensing tankless water

[11] Technical Support Document (TSD) EERE-2017-BT-STD-0019-0058 "Publication of determination.", U.S. Department of Energy, "Energy Conservation Program: Energy Conservation Standards for Commercial Refrigeration Equipment," 80 Fed. Reg. 44892 (Jul. 28, 2015).

heaters, putting it at a pricing disadvantage for that product in the U.S. market. While Rinnai is the current leader in production and sales of gas tankless water heaters in the United States, the elimination of non-condensing tankless water heaters from the market will impact Rinnai's market share and competitive position dramatically. The overall impact of the proposed rule will be to shift more market share to two of the large players in an already concentrated market, and to eliminate a product option that will hamper a smaller competitor's ability to compete; this is anti-competitive and to the detriment of consumers.

More particularly, Rinnai's competitive position with respect to product offerings and pricing would be threatened by the elimination of non-condensing tankless water heaters from the market. If the market moves to condensing tankless gas water heaters only, Rinnai America must import condensing tankless water heaters and therefore would be at a competitive disadvantage with a potentially higher cost position. This ultimately lessens and harms competition in the market. Additionally, since Rinnai does not manufacture storage water heaters, it cannot offer consumers a storage product alternative and would have to compete in the residential water heater market solely on sales of its higher-cost condensing water heater products. As discussed above, Rinnai assesses the incremental installed costs to consumers for condensing over non-condensing to be significant (increased product costs of about $450 (Table 1), and additional costs incurred for condensate management), making it highly likely that replacement consumers rationally will forgo Rinnai's condensing tankless products in favor of storage water heaters.

Rinnai's U. S. production of non-condensing tankless water heaters has contributed and would continue to contribute to a market transition from gas storage water heaters to higher efficiency tankless gas water heating with consequently lower emissions. This economically justified substitution effect is a market dynamic that is in effect today but that would be sacrificed by the elimination of non-condensing tankless water heaters. Since the current non-condensing products contribute efficiencies of 80% and above, these products are an important increased-efficiency option for consumers in the water heater replacement market, resulting in energy savings, reduced emissions, lower life-cycle costs, reduced footprint of water heating equipment, and extended life span of the product. DOE's proposed rules eliminating non-condensing tankless water heaters as a consumer option will disrupt and stall this market-based transition to greater efficiency and lower emissions.

5. In addition to the substantial risk of increasing market concentration and reducing competition, DOE's proposed rule will have specific impacts on Rinnai. Manufacturing at the new Griffin, GA facility is tooled and optimized for production of non-condensing tankless water heaters, which would be banned by the proposed rules. Figure 5 shows a photo of the new, $70 million Griffin facility.

Figure 5 (Rinnai's new manufacturing facility in Griffin, GA):

The net effect if the DOE's proposed rules for tankless water heaters go forward would be to make the Griffin, GA facility largely obsolete. That would result in eliminating 122 current jobs, including 78 jobs held by female workers and 102 jobs held by minority workers.

Rinnai estimates that loss of the Griffin plant production and sales would mean a loss of gross profit of between $30 million and $36 million annually and a write-off of $2 million in capital expenditure (CAPEX) that could not be repurposed. Condensing water heaters are not manufactured using the same technology, and it would require substantial re-investment to be able to convert the facility to a different product. Rinnai estimates that CAPEX for repurposing Griffin to the condensing tankless water heater market would require between $3 million and $9 million, which may be prohibitive given current production capacity in Japan – i.e., unless demand for condensing tankless in the U.S. market exceeds Japan's manufacturing capacity, re-purposing the U.S. facility would not be warranted. And as explained above, Rinnai thinks it is highly unlikely that eliminating non-condensing tankless will result in a shift to condensing tankless; instead, it predicts that over 80% of non-condensing tankless water heaters will be replaced with gas storage water heaters.

6. DOE's analysis does not refute these points on the likely competitive effects of the proposed rule. DOE ignores the likely substitution effect of non-condensing tankless for storage water heaters, particularly in the residential water heater replacement market. DOE did not adequately gather market information or assess the impacts on manufacturers. Notably, while DOE appears to have communicated with two of the large players in the water heater market – who stand to benefit from the elimination of non-condensing tankless as a product substitute – it did not contact Rinnai or seek Rinnai's input on the impacts of the proposed rule. Similarly,

manufacturer meetings convened by DOE did not involve Rinnai.[12] As a result, much of the information presented in this comment letter was never sought or considered by DOE.

Moreover, it appears that DOE *should have* analyzed some of these effects under its "Process Improvement Rule," 10 CFR Part 430, Appendix A to Subpart C, which calls on the DOE to analyze:

> (i) *Impacts on manufacturers.* The analysis of private manufacturer impacts will include: Estimated impacts on cash flow; assessment of impacts on manufacturers of specific categories of products/equipment and small manufacturers; assessment of impacts on manufacturers of multiple product-specific Federal regulatory requirements, including efficiency standards for other products and regulations of other agencies; and impacts on manufacturing capacity, plant closures, and loss of capital investment.[13]

To Rinnai's knowledge, the DOE has yet to conduct an analysis of the "impact on manufacturers" that includes Rinnai's product offerings, manufacturing capacity, or potential plant closure and loss of capital investment, and it has not accounted for its proposed rules' likely market impacts and effects on consumer choice discussed earlier. A responsive analysis would assist the DOJ in making a determination as well as provide a fulsome explanation of the proposed rules' impact on manufacturing.

[12] The DOE Technical Support Document reports conducting manufacturer interviews for developing its analysis of technological feasibility and economic justification, Federal Register/Vol. 88, No. 144/Friday, July 28, 2023/Proposed Rules page 49086 / 49088 as examples. But records indicate that it never contacted Rinnai, and Rinnai is not aware of any communications from the DOE relating to the proposed rule.

[13] 10 CFR Part 430, Appendix A to Subpart C.

Conclusions:

The DOJ in prior determinations has laid out specific considerations to evaluate the anticompetitive effect of DOE proposed rules. *See supra* at 1-2. Respectfully, it is Rinnai's position that the proposed rule at issue here meets each of those criteria and will plainly have anticompetitive effects. DOE's proposed rule eliminating non-condensing tankless gas water heaters (while not substantially increasing the required efficiency for storage gas water heaters) will unreasonably restrict consumer access to an efficient, cost-effective option for tankless water heater products; will disproportionately impact middle-income households and small businesses who cannot afford the more expensive condensing tankless option; and will create an uneven playing field in the market, favoring large players who provide storage gas water heaters that are less expensive but also far less efficient, likely resulting in increased market concentration. Thus, the proposed rule:

- "Substantially [limits] consumer choice" by removing a product from the residential market that provides a higher efficiency option for replacing storage gas water heaters. This cuts off the market trend of consumers substituting cost-effective, more efficient non-condensing tankless gas water heaters for storage gas water heaters, instead removing that product option, and forcing consumers in the replacement market to choose between higher-priced condensing tankless water heaters or lower cost storage gas water heaters. The impacts would be especially dramatic for existing users of non-condensing tankless water heaters. To date approximately four million non-condensing tankless water heaters have been installed. For these units, the DOE's proposed rule would eliminate a drop-in replacement, resulting in lower efficiency options being introduced and higher costs to the consumer.

- Imposes an "unjustified competitive disadvantage" on Rinnai by eliminating the only product it manufactures in the U.S., substantially devaluing (if not rendering obsolete) its investment in a new manufacturing facility, and virtually eliminating potential customers in the replacement market.

- Constitutes a "lessening of competition" by inducing a shift toward storage gas water heaters that favors the large players in the market and may result in increasing market concentration, at the expense of a smaller competitor with a cost-effective, high-efficiency product manufactured in the U.S.

- "Thwart[s] the intent of the revised standards by inducing substitution to less efficient products" by forcing consumers replacing gas water heaters to choose between lower-cost, lower-efficiency storage water heaters or significantly higher cost, more efficient condensing tankless gas water heaters – and market data shows that in a replacement scenario, consumers choose the less expensive option. A shift to storage gas water heaters will lead to decreased efficiency.

Accordingly, Rinnai requests that the DOJ determine that the proposed rule will likely have anti-competitive effects and therefore recommend that DOE revise its proposed rule so as not to eliminate non-condensing tankless gas water heaters from the market. This could be accomplished by DOE in one of two ways: either by setting separate efficiency standards for non-condensing tankless and condensing tankless water heaters, or by setting a standard for all tankless water heaters that is technologically feasible for non-condensing tankless water heaters.

Alternatively, Rinnai suggests that, at the least, DOJ does not have sufficient information, data, and analysis to allow it to conclude that there is no anticompetitive effect here. DOJ therefore should recommend that DOE gather additional information and data and undertake a market analysis to evaluate the evidence and claims presented by Rinnai herein before issuing a final rule. DOJ previously has published recommendations for how to conduct a competitive market analysis, as illustrated in its December 2020 Organization for Economic Co-operation and Development (OECD) paper, "Using Market Studies to Tackle Emerging Competition Issues,"[14] which could serve as a template for DOE's investigation. DOJ thus should determine that there is insufficient evidence on the manufacturing impacts, effects on market concentration, and consumer impacts, and recommend that DOE pause issuing a final rule and instead implement a similar process of using workshops and market studies to gather information and to investigate these factors. That information should then be subject to comment and consideration, including review by DOJ. This process would inform both DOE and DOJ regarding the advisability of the minimum efficiency standards in the proposed rule that exclude non-condensing tankless gas water heaters from the market.

[14] Mancini, J. "USING MARKET STUDIES TO TACKLE EMERGING COMPETITION ISSUES – Contribution from the United States, Session IV, Global Forum on Competition, Directorate for Financial and Enterprise Affairs Competition, Committee, JT03469048, November 26, 2020.

Rinnai greatly appreciates the opportunity to present these comments to DOJ.

Sincerely,

Frank Windsor
President, Rinnai Corporation