March 27, 2024

California Air Resources Board
1001 I Street
Sacramento, California 95814

**Re: Zero-Emission Space and Water Heater Proposed Standards**

Rinnai America Corporation (Rinnai) is submitting this letter to provide input on California Air Resources Board's (CARB) Zero-Emission Space and Water Heater Proposed Standards. Rinnai appreciates the opportunity to provide these comments.

## I. Introduction

Rinnai 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 leading gas tankless ("instantaneous") water heater provider in North America.

Rinnai has its headquarters in Peachtree City, Georgia (GA) and in 2022, it opened the first gas tankless water heater manufacturing facility in the United States, a 360,000 square foot manufacturing facility in Griffin, Georgia. Rinnai's new facility employs advanced automation, precision assembly processes, and is ISO 9001 and/or ISO 14001 certified. The only product that Rinnai manufactures at this new plant is a gas product that will become obsolete under this proposed new rule. Rinnai's new facility alone currently employs 122 people, including 78 jobs held by female workers and 102 jobs held by minority workers. Further, Rinnai has 450 employees in sales, service, customer care, and supply chain, among other areas, many of which work to support the sales, installation, and servicing of gas tankless water heaters. Rinnai is also a proud corporate sponsor of The Midwest Food Bank, Folds of Honor, and Bloom Closet, a local non-profit supporting the needs of foster children.

Rinnai supports efforts to decrease emissions, increase energy efficiency, and reduce energy use. Rinnai has a goal of becoming carbon neutral by the year 2050. The company's brand promise is to "Create 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 believes that all its current and future products will move the United States in that direction.

Since their inception in 2004, tankless gas water heaters have been expanding in the U.S. market, helping improve efficiency, and reduce greenhouse gas emissions. Gas tankless water heaters have grown to 10% of the water heater market in the U.S. and are projected to grow to

12% by 2027. Non-condensing gas tankless water heaters alone, from 2005 to 2022, have saved 339 million MMBtus (0.34 quads) and 37.7 billion pounds (17 million metric tons) of carbon emissions.

CARB's proposed concept timelines eliminate gas water and space heating appliances at different times. These proposal regulations exceed CARB's authority and will adversely impact Rinnai's business, undermining tens of millions of dollars in capital investment and threatening the livelihoods of hundreds of American workers. If CARB's statewide regulatory rule were to go into effect, it would eliminate Rinnai's gas product offerings and significantly impact Rinnai's water and space heater sales. Therefore, Rinnai does not support either of the concepts / timelines being proposed - Concept A or Concept B.

## II. Background

CARB is developing a proposed regulation "Zero-emissions Standards for Appliances" aimed at lowering emissions from newly sold space and water heaters within the state to achieve its climate objectives. On February 28, 2024, during the Public Workshop: Zero-Emission Space and Water Heater Standards CARB brought forward two proposed timelines for this statewide ruling:

**Concept A:** Statewide Rule as Described in 2022 SIP Strategy Measure
Regulatory concept A would target and include:

- All new sales of residential and commercial space and water heaters by 2030
- Would not limit the use or repair of existing space and water heaters

**Concept B:** Statewide Rule Based on Bay Area and South Coast Measures
Regulatory concept B would target and include:

- New sales requirement for space and water heaters
- This option is based on the adopted Bay Area and the proposed South Coast rules statewide using their staggered compliance dates by capacity and application as summarized in Table 1.

**Table 1.**

| Effective Date | Equipment Type | Capacity/Size Limits |
|---|---|---|
| 2027 | Boilers and water heaters | < 75,000 Btu/h |
| 2029 | Central furnaces | < 175,000 Btu/h |
| 2029 | Boilers and water heaters | ≤ 400,000 Btu/h |
| 2029 | Instantaneous water heaters | ≤ 200,000 Btu/h |
| 2031 | Boilers and water heaters | ≤ 2MM Btu/h |
| 2031 | Pool heaters | ≤ 400,000 Btu/h |
| 2031 | Instantaneous water heaters | ≤ 2MM Btu/h |
| 2033 | High temperature (>180°F) boilers and water heaters | ≤ 2MM Btu/h |
| TBD | Central furnaces | ≤ 2MM Btu/h |

## III. Discussion

Rinnai manufactures highly efficient water and space heating products that have contributed to significant reductions in energy and emissions and is on the path of achieving its sustainability goals including 2030 “low-carbon targets” and decarbonization by 2050. Rinnai believes that all its current and future products will move the United States in that direction.

The proposed regulatory concept timelines, specifically for the water heating and boiler categories would eliminate the installation of new gas water and space heating appliances in homes and commercial applications driving the phase-out of highly efficient gas water heaters and boilers. Rinnai does not support proposed rules that eliminate gas appliances.

Rinnai would like to bring forward additional concerns and challenges CARB’s “Zero-Emission Space and Water Heater Proposed Standard” imposes on customers, businesses, and manufacturers.

### A. Federal Preemption Concerns

The Energy Policy and Conservation Act (EPCA) enables the U.S. Department of Energy (DOE) to establish energy conservation standards across the nation for various appliances and equipment. This act aims to prevent individual states from enacting their own regulations that could influence the energy standards for these products, except in rare cases.

According to the preemption clause of EPCA, states are barred from implementing regulations related to the energy efficiency or usage of specific products. This clause has been broadly interpreted by courts to indicate that Congress intended it to have a wide-ranging preemptive effect.

State-level energy usage regulations for DOE-regulated products are directly prohibited. In the case of California Restaurant Association v. City of Berkeley, the Ninth Circuit clarified that EPCA blocks regulations, including building codes, that dictate the amount of natural gas consumed by certain consumer appliances at the usage point.

From Energy in Depth California and an update on the Federal Court Overturns Berkeley Natural Gas Ban (Nicolas Jacobs Mar. 26, 2024) “The City of Berkeley has agreed to repeal its natural gas ban after the Ninth Circuit declined to rehear the case in January 2024 – affirming the courts April 2023 decision to strike down the city’s natural gas ban as preempted by Federal Law.”

Through EPCA, Congress aimed to prevent states and localities from restricting the use of specific products in homes, kitchens, and businesses. The enactment of EPCA's preemption clause was intended to prevent the formation of disparate state appliance standards, which were leading to a confusing mix of state regulations, and to promote a unified national strategy for appliance regulation.

CARB's proposal contradicts EPCA's federal preemption by proposing a total ban on the sale of space and water heaters based on their energy type regardless of their adherence to federal standards. These proposals would complicate the regulatory landscape by adding another layer to the already complex "patchwork." To stay true to the intent of EPCA's preemption clause Rinnai requests the timelines and the overall rule being proposed for zero-emission space and water heaters be withdrawn.

**B. Product Availability and Consumer Adoption Cost**

The proposed concepts will require new and existing homes and buildings to adopt zero-emission products. There is a wide range of products including instantaneous gas products installed and available in the market. This rule could result in low- and middle-income families being stranded without a cost-effective, efficient, and reliable solution for hot water once their gas tankless water heater can no longer be repaired. For many consumers who urgently need to replace their water or space heater, a like-for-like replacement provides best compatibility with the existing infrastructure, lowest complexity, relative ease of installation, and cost-savings.

The proposal will result in significantly higher upfront costs, complexity, and burden to the consumer because the initial cost of purchasing and installing zero-emission appliances, like an electric heat pump water heater (EHPWH) or an electric boiler is higher than their gas counterparts. The cost difference would limit or exclude water and space heating accessibility to low and in some cases middle income families. Based on DOE's own estimates, the EHPWH solution, even at a Tier 4 rating, is estimated to have a 10-year life - at least 5 years less than a gas tankless water heating solution, which would significantly impact the total life cycle cost to the consumer. This rule, therefore, could strand families with a cost-effective, efficient, and reliable solution with limited options for hot water once their gas tankless water heater can no longer be repaired.

Furthermore, CARB's own assessment on available technologies such as the EHPWH show that the current adoption is low, requires larger tanks to supply equivalent capacity to the consumer, have electrical power/outlet barriers, long recovery times, and require additional condensation management and adequate ventilation. While for limited use and applications, EHPWH or electric boilers may find its place, these technologies for some applications, like high-heat / high-temp applications or specific uses, may not yet offer a fully viable or desirable alternative to their gas counterparts. Moreover, pushing for a one-size-fits-all approach may overlook the potential of emerging technologies, such as hydrogen-enriched natural gas, hydrogen, or biofuels, which could provide alternatives to complement natural gas and support emission reductions without necessitating a complete overhaul of gas water and space heaters, and the infrastructure.

Furthermore, mandating the installation of zero-emission water heaters and boilers often requires substantial upgrades to the electrical infrastructure, both at the grid level and within homes and buildings (i.e., upgrading electrical panels and wiring). These upgrades require

investment and can disrupt households and businesses during the transition. This will also increase the demand for electricity due to the mandated adoption of zero-emission appliances, continuing to drive concerns about the grid's capacity to handle peak loads, especially in locations already experiencing strain on their electrical systems. This requires careful planning to ensure the reliability of the power grid, particularly during peak usage times. This proposal does not adequately address the challenges or propose a path to mitigate them.

Rinnai is also concerned because these stringent regulations do not adequately account for regional variations, technological advancements, consumer choice or individual circumstances and needs. A more flexible approach that allows for a mix of technologies and products, fuel types and recognizes the diverse needs of different consumer needs would be more effective. Encouraging innovation and providing incentives for voluntary transitions could achieve environmental goals without imposing undue burdens.

### C. Conflicts in Standards

The proposal presents potential conflicts and inconsistency with existing policies at state levels, inter-state levels, federal, and other agency levels, which may not only hinder the effectiveness of environmental actions but also create regulatory, economic, and practical challenges for consumers, businesses, and manufacturers. The federal government, through agencies like the DOE and the Environmental Protection Agency (EPA), has its own federally recognized set of standards and regulations for appliances, focusing on energy efficiency and emissions. CARB's zero-emission mandate on water heaters and boilers creates a regulatory mismatch, complicating compliance for manufacturers and potentially leading to a confusing market landscape where different standards apply in different districts. This inconsistency can stifle innovation and slow down the national progress towards cleaner energy goals. Furthermore, many state and federal policies aim to enhance energy independence and security by diversifying energy sources, including gas. The CARB standard, by pushing for electrification, might inadvertently undermine these broader energy policies by sidelining investments in cleaner natural gas technologies and infrastructure improvements that can also contribute to reducing emissions and enhancing energy resilience.

Manufacturers are required to comply with already existing laws and regulations and new updated requirements. CARB should consider these other mandates and allow additional time for any proposed deadlines. This would help ease the burden placed on manufacturers already working towards complying at the national level and meet CARB’s requirements.

## IV. Conclusion

The proposed rule to control the space and water heating manufacturing market, puts California on a path to eliminate cost effective highly efficient solutions for customers and could create the situation where hot water or space heating is no longer accessible for some consumers. Promoting certain appliances and fuel types and eliminating others can have a drastic impact on consumers, businesses, and manufacturers. Legislative discussions aim to gradually and

incrementally increase efficiency standards to promote energy conservation on a federal level – but not to change the selection of appliances available to builders and consumers in the market. Through this proposed rule on various appliances for space and water heaters, CARB is independently re-making the California appliance and energy industry. This is a major change that will have significant impacts on consumers, businesses, and manufacturers. The rule should not limit the types of appliances available to the user by being selective to specific fuel types.

Rinnai requests that the proposal for zero-emission space and water heaters be withdrawn and for CARB to coordinate across state and federal agencies to ensure that policies are aligned on advancing the goal of a sustainable and resilient energy future. A proposal to eliminate gas appliances increases the strain on the grid, neglects the unique needs of diverse households and consumers, and impacts low- and middle-income families' ability to have hot water.

Rinnai appreciates the opportunity to present these comments to CARB and we look forward to continuing to work together to address the challenges. We look forward to working with you on this initiative, and please contact us with any questions and requests for information.

Thank you for your time.

Sincerely,

Renee Eddy

Digitally signed by Renee Eddy
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