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California Air Resources Board
1001 I Street
Sacramento, California 95814

(Submitted electronically via: <https://ww2.arb.ca.gov/public-comments/zero-emission-space-and-water-heater-february-28-2024-workshop-public-comments>)

Re: AHRI Comment to CARB on Zero-Emission Space and Water Heater Initial Regulatory Concepts from the February 28, 2024 Workshop

The Air-Conditioning, Heating & Refrigeration Institute (AHRI) submits this letter to provide input on the two regulatory concepts presented at the California Air Resources Board's (CARB or Agency) Zero-Emission Space and Water Heater Regulatory Concepts Public Workshop on February 28, 2024. AHRI appreciates the opportunity to provide these comments. For the reasons discussed below, AHRI does not support CARB's two proposals, as written.

I. Introduction

AHRI represents more than 330 manufacturers of heating, ventilation, air conditioning, and refrigeration (HVACR) and water heating equipment. It is an internationally recognized advocate for the HVACR and water heating industry and certifies the performance of many of the products manufactured by its members. In North America, the annual economic activity resulting from the HVACR industry is approximately \$211 billion. In the United States alone, AHRI member companies, along with distributors, contractors, and technicians employ more than 704,000 people.

AHRI and its members are committed to greenhouse gas (GHG) and oxides of nitrogen (NOx) emissions reductions that support human health and the environment while protecting the jobs and the products that are essential to our society's well-being.

A. AHRI Member Products Provide Critical Services to California

Space and water heater products¹ include a wide range of manufactured goods, which provide comfort and ensure public health and safety. These space and water heater products serve and support nearly every major sector in California, providing life critical products and services for medical facilities and hospitals; government agencies; the U.S. military; law enforcement, first responders, and public safety; energy; public works and infrastructure support services; critical manufacturing; defense industrial base; and conservation. Often, the health, safety, and the functioning of society depend on these products. Overly burdensome regulations could impair the HVACR and water heating sector's ability to meet these critical needs.

B. AHRI Members Have Greatly Reduced Emissions

AHRI and its members are committed to the overall health of the environment and have a long history of developing products to meet ever-more-challenging aspiring carbon neutrality and emission-reduction goals. Over the past 20 years, the industry has made significant investments toward reducing its emissions and its carbon footprint by creating cleaner technologies and products.

However, on the path to carbon reductions, there are many significant challenges and technological constraints to what can be achieved.

II. Background of Issue

AHRI understands that CARB has obligations to meet a variety of federal and state mandates, however the vastness of the regulatory scope is burdensome for the regulated community. Under federal requirements, "CARB is responsible for preparing the State Implementation Plan (SIP) for attaining and maintaining the National Ambient Air Quality Standards (standards) as required by the federal Clean Air Act (the Act)."²

CARB is also responsible for implementing several state mandates, including California Assembly Bill (AB) 32, the "Global Warming Solutions Act of 2006."³ AB 32 requires CARB to develop a Scoping Plan which lays out California's strategy for meeting the states GHG reduction goals.⁴

¹ Space heating products include space heaters, room heaters, ventless room heaters, infra-red heaters, heat pumps, furnaces, boilers, heating elements, burners, boiler equipment and associated parts and accessories, anti-scaling agents, filters, venting, and their associated spare parts, and similar products. These examples are meant to be representative, not exhaustive, of heating products. Water heating products include products which heat water for potable uses; water heating equipment that utilizes gas, oil, or electric (via electric resistance heating elements or a heat pump); storage water heaters; tankless water heaters; and others. Water heater products utilize oil, gas, or electricity to heat potable water for use outside the heater upon demand, and similar products. These examples are meant to be representative, not exhaustive, of water heater products.

² 42 U.S.C. § 7401 et seq.

³ https://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=200520060AB32; Approved by Governor on September 27, 2006.

⁴ <https://ww2.arb.ca.gov/resources/fact-sheets/ab-32-global-warming-solutions-act-2006>

The SIP⁵ and the 2022 Scoping Plan⁶ are just a few parts of California’s overarching approach and many ongoing initiatives to combat air pollution and climate change. Other key state initiatives and regulations focusing on the HVACR and water heating sector include:

- Air Quality Management District (AQMD) rules and requirements
 - Bay Area Air Quality Management District (BAAQMD) Rules 9-4 and 9-6
 - South Coast Air Quality Management District (SCAQMD)
 - San Joaquin Valley Air Pollution Control District
- Triennial updates to CA energy codes
- SB 253: Climate Corporate Data Accountability Act
- SB 261: Greenhouse gases: climate-related financial risk
- SB 54: Solid waste: reporting, packaging, and plastic food service ware
- SB 1383 and SB 1206 for state-level hydrofluorocarbon (HFC) phase down and refrigerant management

Although not a complete inventory, this list shows the extensive breadth of state-level mandates for which the regulated community is responsible. Meanwhile, there are many initiatives in other states as well as federal laws and regulations for which the HVACR industry is responsible. Collectively, the regulatory burden on manufacturers is extensive.

A. CARB’s Ambitious Goals

CARB has set ambitious emissions reduction goals for the state of California. Through the final 2022 Scoping Plan, the State Implementation Plan,⁷ and other initiatives, CARB is establishing plans to achieve its most ambitious goals to date, including policies and actions designed to reach statewide carbon neutrality by 2045.⁸ Under California Governor Gavin Newsom’s direction, these proposals are “unprecedented in scale and scope, representing the most aggressive approach to reach carbon neutrality by any jurisdiction in the world.”⁹

AHRI supports CARB’s efforts to improve air quality and minimize the effects of climate change by reducing air pollution sources and GHG emissions,¹⁰ and as described above, the industry has made significant progress towards alignment with CARB’s ambitious goals and have already attained tangible achievements. However, there are significant technical challenges to continued progress that must be acknowledged.

B. CARB’s Current Proposals

In its efforts to reduce GHG and NOx emissions from new space and water heaters sold in the state to help meet climate goals and federal air quality standards, CARB has provided two regulatory concepts that are under consideration.

⁵ https://ww2.arb.ca.gov/sites/default/files/2022-08/2022_State_SIP_Strategy.pdf

⁶ <https://ww2.arb.ca.gov/sites/default/files/2022-11/2022-sp.pdf>

⁷ https://ww2.arb.ca.gov/sites/default/files/2022-08/2022_State_SIP_Strategy.pdf

⁸ https://ww2.arb.ca.gov/news/california-releases-final-2022-climate-scoping-plan-proposal?utm_medium=email&utm_source=govdelivery

⁹ *Id.*

¹⁰ <https://ww2.arb.ca.gov/about>

“Regulatory Concept A”: Statewide Rule as Described in 2022 SIP Strategy Measure¹¹

The first initial regulatory concept under development, would target “all new sales of residential and commercial space and water heaters by 2030.”¹² This option “would not limit use or repair of existing space and water heaters.”¹³

“Regulatory Concept B”: Statewide Rule Based on Bay Area and South Coast Measures¹⁴

The second regulatory concept under development would become a new sales requirement for space and water heaters. This option is based on the already-adopted Bay Area mandate and the proposed South Coast rules. It would apply statewide using these rules’ staggered compliance dates by capacity and application.¹⁵

III. Discussion

As described above, the HVACR industry has been at the forefront of developing technologies to reduce emissions, and AHRI and its members have already made significant reductions. As CARB explores solutions to further reduce emissions, the Agency must understand the unique realities and challenges facing the HVACR industry before promulgating any additional regulations. AHRI would like to discuss the following issues:

A. *Regulatory Certainty*

i. Need for Harmonization

AHRI recognizes that the regulatory concepts proposed by CARB are attempting to minimize the patchwork of laws and regulations that are seen in other California jurisdictions but urges CARB to harmonize any new proposals with current and emerging federal standards. As such, AHRI recommends promulgating regulations that are based on manufacture dates and not sale or installation dates such as seen in recent BAAQMD rules.¹⁶ A regulatory approach based on equipment manufacture date promotes certainty to the regulated community.

AHRI also points out that the lack of specified equipment type in Proposal A is out of synchronization with most other existing and proposed regulations and reduces clarity for stakeholders. In addition, timelines and equipment categories (i.e., capacities) should take into consideration expected market trends as a result of DOE energy conservation standards and harmonize in a way that will allow manufacturers to efficiently build up capacity smoothly to meet all currently proposed regulations.

¹¹ 2024-02-28 “Zero-Emission Space and Water Heater Standards” Public Workshop presentation; <https://ww2.arb.ca.gov/our-work/programs/building-decarbonization/zero-emission-space-and-water-heater-standards/meetings-workshops>.

¹² *Id.*

¹³ *Id.*

¹⁴ *Id.*

¹⁵ *Id.*

¹⁶ BAAQMD Rules 9-4 and 9-6 “Building Appliances” (<https://www.baaqmd.gov/rules-and-compliance/rule-development/building-appliances>).

AHRI encourages CARB to consider a harmonized approach to its policymaking, involving coordination with other state and federal agencies, and local governments to ensure that policies are aligned, complementary, and collectively effective in advancing the goal of a sustainable and resilient energy future. AHRI members support a single, national policy that ensures continued safe, reliable, affordable access to critical heating and cooling services.

ii. Federal Preemption in the Ninth Circuit

AHRI urges CARB to consider the broad effect of the Energy Policy and Conservation (EPCA) preemption provision discussed by the Ninth Circuit court in *California Restaurant Association v. City of Berkeley* (*Berkeley*), where the court ruled that the City of Berkeley’s ordinance banning the use of natural gas violated EPCA. EPCA gives the Department of Energy (DOE) the authority to set nationwide energy conservation standards for various types of appliances and equipment. Its goal is to prevent individual states from creating rules that would affect the energy consumption standards of these appliances, with limited exceptions.

The court in *Berkeley* focused extensively on Congress’s intent for the broad extent of EPCA’s preemption provision, particularly related to EPCA-covered products and equipment.¹⁷ “To erase any doubt, rather than limit preemption to facial regulations of products, Congress expressly expanded EPCA’s reach to regulations that “concern[]” such products. § 6297(c). . . . We thus read the term “expansively” and, as a matter of ordinary meaning, a regulation may “concern” something without directly regulating that thing.”¹⁸

Furthermore, the court in *Berkeley* points to the Government’s interpretation of EPCA from a December 1982 publication in the *Federal Register*, where it warned that “[s]tandards subject to preemption would include standards for any particular type (or class) of covered products established by *mandatory State or local building codes*.” 47 Fed. Reg. 57,198, 57,215 (Dec. 22, 1982) (emphasis added).¹⁹

Finally, in *Berkeley*, the court stated that “EPCA’s preemption provision extends to regulations that address the products themselves *and* building codes that concern their *use* of natural gas. By enacting EPCA, Congress ensured that States and localities could not prevent consumers from using covered products in their homes, kitchens, and business.”²⁰ AHRI recognizes that CARB is not setting efficiency standards or building codes, but the end effect of zero-emissions does concern the use of natural gas.

Therefore, AHRI encourages CARB to consider the potential effect of this proposal on space and water heaters, considering the Ninth Circuit court’s decision in *Berkeley*.

¹⁷ *California Restaurant Association v. City of Berkeley* 89 F.4th 1094 (2024). “The Supreme Court has explained that “[c]oncerning’ means ‘relating to,’ and is the equivalent of ‘regarding, respecting, about.’” *Lamar, Archer & Cofrin, LLP v. Appling*, 138 S. Ct. 1752, 1759 (2018) (simplified). In the legal context, this has “a broadening effect, ensuring that the scope of a provision covers not only its subject but also matters relating to that subject.” *Id.* at 1760.”

¹⁸ *Id.* at 1103.

¹⁹ *Id.* at 1104.

²⁰ *Id.* at 1103.

B. Technical Challenges

i. Product Availability

CARB's regulation needs to ensure a pathway for compliance if there is not a significant supply of commercially available products to meet state requirements. Absent such a guardrail, CARB risks a situation where product availability limits stock available for sale into the state, which in turn could lead to increase equipment costs to consumers. Additionally, without a proper assessment of the market, CARB risks leaving low- and middle-income (LMI) communities in a position where these communities cannot afford replacement equipment and may be forced to go without heat or hot water. The steps to achieve that goal must be evaluated as being not only technically feasible but economically justified as well. To this end, AHRI would recommend a similar approach to BAAQMD Implementation Working Group to provide a mechanism to evaluate the market and reassess implementation dates ahead of zero-emissions standards going into effect.²¹

TECH Clean California recently published data analyzing California-specific cost and workforce information.²² CARB needs to go beyond the available data cost studies, which did not include realities that many California consumers will face, including equipment relocation, panel upgrades, and ductwork replacement, to consider the impact on California businesses, particularly small businesses, if CARB proposes regulations limiting the sale or installation of certain common space or water heating technologies.

ii. Consumer Adoption Costs

AHRI recommends CARB focus on reducing the heating and cooling load by improving rate structures and providing incentives to help those who cannot afford the cost of these improvements, especially in the existing building stock. CARB should also encourage proactive replacement of lower efficiency equipment and, where appropriate and cost effective, the installation of dual fuel systems, including incentives for small businesses and LMI households. Lastly, CARB should address equity and environmental justice concerns and support its proposals through tax credits and utility rebates.

iii. Need for Flexible Approach

AHRI recommends that CARB address challenges such as supply chain constraints, product capacity development, and manufacturing limitations, which were not addressed in their Public Workshop.

AHRI also recommends CARB review challenges associated with existing buildings by building type and by existing installed space and water heating technology. The February 2024 Tech

²¹ Bay Area Air Quality Management District Rule: 9-6-404.

²² TECH Clean California: Incremental Cost Study Final Phase I Findings February 12, 2024. Available here: <https://techcleanca.com/public-data/evaluation-studies/>. The phase one study of initial incremental cost estimates for residential single-family space conditioning heat pump and non-heat pump scenarios has recently been published.

Clean California Incremental Cost Study reviewed costs of six different scenarios.²³ It may also be necessary to review urban, suburban, and rural circumstances separately. This level of disaggregation might be needed to ensure that no community is left behind.

AHRI is concerned that such regulations might 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 and recognizes the diverse needs of different consumers is appropriate. Encouraging innovation and providing incentives for voluntary transitions could achieve environmental goals without imposing undue burdens.

C. *Timeline Issues*

i. Implementation Dates are Not Mandated

AHRI has additional concerns with the proposed timelines in both proposals. We understand that CARB has an obligation to meet SIP and Scoping Plan standards, as well as to address nonattainment areas within the state. The commitment in the SIP is that CARB is meant to achieve the same NOx emission reductions as would be achieved from a 2030 transition date to zero emissions space and water heating equipment. This commitment does not limit the required transition of hard-to-electrify products to any set date and allows for flexibility in the design of the zero-emission standard.

AHRI and its members find flexibility under SIP, “CARB *could* propose additional emissions standards for combustion sources used in buildings...”²⁴ (emphasis added) but it is not a requirement. Furthermore, Table 41 “Water Heating and Space heating Estimated Emissions Reductions” states that “*proposed* implementation *begins* [in] 2030.”²⁵ (emphasis added). Here, in the SIP, any regulatory changes are proposed, not required, and the implementation would begin in 2030. Thus, AHRI reminds CARB that any new proposal can have flexibility in proposed timelines.

ii. Additional Timing Considerations

Finally, CARB should consider the timing of the publication of the final rule and the effect it will have on the regulated community’s ability to make necessary changes to develop, implement, test, manufacture, and deploy new technologies. For complex durable goods, this is a very lengthy process which includes time for product redesign, implementation, and testing; each stage can take multiple years.

The normal design cycle for equipment of this type is three years and, if approved, this Proposal would be promulgated with a short timeline under very challenging circumstances when electronic parts are in short supply and timing of receipt of goods has been lengthened considerably for components and finished goods. Engineers and other experts needed for design

²³ TECH CLEAN CALIFORNIA: INCREMENTAL COST STUDY Final Phase I Findings February 12, 2024. Available, here: <https://techcleanca.com/public-data/evaluation-studies/>

²⁴ https://ww2.arb.ca.gov/sites/default/files/2022-11/Proposed_2022_State_SIP_Strategy.pdf

²⁵ https://ww2.arb.ca.gov/sites/default/files/2022-11/Proposed_2022_State_SIP_Strategy.pdf

also report challenges with remote work requirements with much of their time spent addressing supply chain issues by qualifying new equipment.

Furthermore, approximately 18 months of testing is required for new products, which can only be listed after testing for safety, energy efficiency, vibration for over-road transportation, and other testing. Every new product test must funnel through nationally recognized testing laboratories (NRTLs).

Additionally, manufacturers are required to comply with already existing laws and regulations such as the DOE commercial water heater energy conservation standard (ECS) final rule, as well as the proposed DOE consumer (residential) water heater energy conservation standard. Federal law allows product manufacturers three years to redesign, recertify, and market commercial products that are compliant with the new requirements, and five years for residential products.

CARB should take these other mandates into account and allow additional time for any proposed deadlines. These changes would help ease the burden placed on manufacturers already working towards complying at the national level and allow additional time to adjust to the California market.

D. Exemption Process

CARB should develop an exemption process to support manufacturers, owners, operators, and everyone in the regulated community that accounts for justified needs and emergencies.

It is important to include an off-ramp so that course corrections can be made as manufacturers collectively learn the best way forward in this new terrain. Policymakers must ensure that the regulatory process allows for and encourages innovation that will provide better solutions.

SCAQMD attempts this effort in its PAR 1146.2,²⁶ which is a good start, but we recommend that CARB work with stakeholders to anticipate implementation issues that will undoubtedly arise.

E. Continued Collaboration

The HVACR and water heating industry shares CARB's goals to achieve a reduction in air pollution and to reach carbon neutrality, while reducing harmful emissions in California. However, these goals can only be achieved by working together. Strong government and industry cooperation will ensure that we meet these challenges by developing goals and timeframes that are clear, reasonable, and attainable. AHRI looks forward to future workshops and other opportunities for collaborative efforts to provide input and determine feasibilities as these regulations are developed.

²⁶ <https://www.aqmd.gov/docs/default-source/rule-book/Proposed-Rules/rule-1146-1146.1-and-1146.2/par-1146-2-draft-rule-language-february-2024.pdf>

IV. Conclusion

In conclusion, AHRI does not support CARB's two proposals, as written.

AHRI looks forward to continuing to work together to address these issues thoughtfully and reasonably. Please do not hesitate to contact us with questions or if we may provide additional information. We look forward to a continued robust partnership now and in the years to come.

Sincerely,

A handwritten signature in black ink that reads "Stacy Tatman". The signature is written in a cursive, flowing style with a large loop at the end.

Stacy Tatman, MS, JD
Senior Director, Regulatory Affairs