



2311 Wilson Boulevard Suite 400 Arlington VA 22201 USA
Phone 703 524 8800 | Fax 703 562 1942
www.ahrinet.org

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Massachusetts Department of the Environmental Protection
One Winter Street
Boston, MA 02108
(Submitted via email to climate.strategies@state.ma.us)

Re: AHRI Comments to Massachusetts November 20, 2019 Pre-rulemaking Stakeholder Meeting Regarding Prohibitions on the Use of Certain Hydrofluorocarbons in Aerosol Propellants, Chillers, Foam, and Stationary Refrigeration End-Uses and Refrigerant Management Program

Dear MassDEP staff,

The Air Conditioning Heating and Refrigeration Institute (AHRI) submits this letter in response to the stakeholder meeting held on November 20, 2019 regarding the Massachusetts Department of the Environmental Protection (MassDEP) contemplation of regulations, *“Prohibitions on Use of Certain Hydrofluorocarbons in Aerosol Propellants, Chillers, Foam, and Stationary Refrigeration End-Uses and a Refrigerant Management Program”*.

AHRI represents over 315 air-conditioning, heating, and refrigeration equipment manufacturers. In North America, the annual output of the HVACR and water heating industry is worth more than \$44 billion. In the United States, the industry supports 1.3 million jobs and \$256 billion in economic activity annually.

AHRI has been working for more than a decade to support regulations to reduce the consumption and production of HFCs. Our members strongly supported the agreement to amend the Montreal Protocol on Substances that Deplete the Ozone Layer to phase down HFC production and consumption as a proven, predictable, and practical approach. We demonstrated that support in our work with state regulators and environmental non-governmental organizations (E-NGOs). Our industry has worked closely with local governments, both foreign and domestic, to prepare and successfully execute the safe, orderly, and economical transition to low-GWP refrigerants. We look forward to collaborating with the MassDEP if regulations progress; we hope that our comments will be helpful as you consider regulations.

We are currently working together with our E-NGO partners and with the eight Climate Alliance states that have announced an intent to regulate HFCs in the United States. It is our goal, in lieu of federal regulations, to help states and provinces adopt and implement laws and regulations consistently across jurisdictions. We recognize that regulations must meet greenhouse gas reduction objectives while still providing critical benefits—preserving food and

medicine and, in some cases, life-saving facility cooling. As a matter of general policy, AHRI would prefer a federal initiative to address low-GWP refrigerants to avoid a patchwork of regulations, and AHRI is actively pursuing federal legislation to achieve national HFC phase down. We recognize Massachusetts's consideration to address this important issue and appreciate the opportunity to comment on the regulation.

As Massachusetts contemplates certain measures, AHRI would like to focus on recommendations designed to harmonize aspects with existing regulations, to align with the intent of the original federal Environmental Protection Agency (EPA) Significant New Alternative Policy (SNAP) rules and share best practices that are intended to achieve a workable, enforceable framework to provide certainty, consistency, and fairness for industry.

Building codes must be updated to enable low GWP alternatives.

Some low-GWP refrigerants have different flammability and toxicity properties than currently used products. In order for manufacturers to design, test, and certify products with low-GWP alternative refrigerants, updated safety standards must be adopted into state building codes. For example, the model building code has not yet been updated to enable the use of mildly flammable refrigerants, but, for some high-pressure chillers to comply with SNAP Rule 21, the only viable refrigerant option is mildly flammable. ASHRAE Standard 15 and UL 60335-2-40 are industry safety standards that provide the requisite specifications for manufacturers to design safe, compliant products. These standards must be adopted into Massachusetts building codes for chillers manufacturers to fully comply with a regulation based on EPA SNAP Rule 21.

Massachusetts is currently using the 2015 International Building Code (IBC), International Mechanical Code (IMC), and International Residential Code (IRC). None have the necessary provisions to allow the use of mildly flammable refrigerants within the building. References to the new ASHRAE 15-2019 and UL60335-2-40 3rd edition must be included; however, the 2021 code cycle has closed. The next code cycle would be implemented too late for to merely adopt the SNAP Rule 21 compliance date of January 1, 2014 for chillers. One option would be for adoption of references to ASHRAE 15-2019 and UL60335-2-40 3rd edition. Should MassDEP proceed with regulations, AHRI requests that MassDEP work with the Board of Building Regulations and Standard to adopt rules permitting the use of substitutes not prohibited by a regulation as presented on November 20, 2019, into the Massachusetts State Building Code (MSBC).

AHRI has developed an expertise in the codes and standards amendments required to successfully install low-GWP refrigerant. We would appreciate the opportunity to engage with and educate MassDEP staff and other government officials on the necessary code changes.

EPA listing of medium GWP refrigerants

The EPA refrigerant alternative listing process has become complicated due to the litigation that struck down EPA SNAP Rule 20 and 21. Although industry has long supported and advocated for EPA to formally approve/list medium GWP refrigerants for several types of commercial refrigeration equipment, those alternative refrigerants are not now, and may never be, listed as acceptable substitutes in the *Federal Register*. Some chiller substitutes are also not

yet SNAP program listed as acceptable. If MassDEP adopts SNAP Rules 20 and 21, high GWP refrigerants will no longer be allowed to be used in these new equipment types, and medium and low GWP substitutes are not yet federally approved for all commercial refrigeration equipment types. In the face of this dilemma, AHRI proposes a simple fix, relying on existing federal procedures as described below.

When a chemical producer or user submits a request for EPA to consider approving a new refrigerant, the EPA evaluates the application, and eventually sends the submitter a *Completeness Letter* or correspondence stating the submission is complete and the Agency will evaluate the proposed substitute. The *Completeness Letter* often includes language that allows the submitted substitute to be sold while the evaluation is ongoing, i.e., “...90 days from the date of this letter, this product may be entered into interstate commerce.”

AHRI anticipates that for a discrete number of applications, reliance on an EPA *Completeness Letter* may be necessary for a manufacturer to legally design and use products that have not yet been finalized as “SNAP-listed.” The only impetus for the reliance on Completeness Letters is the legal complexities that have grounded EPA-approvals to a near stop in recent years. We propose that Massachusetts recognize *Completeness Letters* as equivalent to SNAP listing for discrete refrigerants and applications, where needed. Alternatively, an exception can be granted for these cases until such time the appropriate refrigerants are SNAP program listed.

The California Air Resources Board (CARB) accepted our proposal to use *Completeness Letters* for several mid-range GWP alternatives that are not now, and may never be, on the EPA’s list of approved substitutes. The chemical producers provided their *Completeness Letters* to AHRI and are well-aware of this effort in California.

Administrative requirements should not be overly burdensome

Communication with end-users and regulatory agencies will be an important component of a successful transition. Some states are considering a range of administrative requirements related to disclosure to end-users and to regulatory agencies. Due to differences in products that use HFCs, administrative requirements should be flexible to allow for practical solutions to be implemented especially accounting for different supply chains for consumer products and residential, commercial, and industrial products that are required to be installed and maintained by professional technicians.

AHRI recommends including provisions in regulations that would expressly permit the use of internet disclosures in lieu of physical labels. Industry experience demonstrates that physical labels are not an effective means of communicating compliance with consumers or regulators because this kind of equipment is never on display. Rather, it is stored in a warehouse until after it is contracted for, sold, and installed. Internet disclosures are a more cost effective and practical means of communicating important compliance, installation, and consumer information about installed equipment such as commercial refrigeration. Importantly, the AHRI Directory offers an existing accessible database of readily available information on a vast array of regulated equipment. It is important to note that not all AHRI member products are represented in the AHRI

Directory. The AHRI Directory may be of use to regulators as states promulgate HFC rulemakings, particularly as a means of easily accessing information on the many millions of models on the market. Currently, this centralized database provides contractors, regulators, and consumers with product information, including model-specific certificates and EnergyGuide labels.

We extend the offer to host a webinar to introduce MassDEP staff to the AHRI Directory and showcase the capabilities that could be adapted to help manufacturers comply with internet disclosures. The AHRI Directory website is, <https://www.ahridirectory.org>.

One additional consideration regarding disclosure requirements is the need for concise, generic language. As MassDEP is aware, an important policy consideration in implementing state regulation is the additional burden that a state-by-state patchwork of regulations can impose on a line of products that are marketed and sold nationally. A practical regulation would align as much as possible with other states' requirements to reduce added costs to Massachusetts consumers for Massachusetts-specific products. As such, we would encourage the MassDEP to adopt alternate, generic language for any labeling provisions.

Regarding disclosure to MassDEP, several other states have established regulations including Washington State and California. Washington State requires reporting of refrigerant used by product type while California requires manufacturers to keep records including documenting the refrigerant used and retaining that information for five years for disclosure upon request. AHRI would like to point out that neither control measure is particularly practical for residential, commercial, and industrial HVACR equipment. AHRI urges MassDEP to consider the following complexities to such disclosure requirements:

- Many products are sold through a lengthy supply chain to distributors that operate in multi-state geographic regions, who then sell a product to a contractor, who sells it to an end-user or installs the equipment. This complex supply chain makes recordkeeping challenging or even impossible. Consequently, manufacturers may not have records that include information about the end-user, such as the name and address of the purchaser or the date of sale.
- Equipment is frequently sold in parts or components. These components may not individually contain any refrigerant. Manufacturers of these components may not know what refrigerant will ultimately be used rendering compliance untenable.
- Sales disclosures, including customer lists, market shares, and product selections are important proprietary business data. For example, the U.S. Department of Justice (DOJ) discourages the disclosure of any market data or sales information that is not an aggregation of more than five market players. This also comes with a risk of public disclosure that could result in anticompetitive liabilities, contrary to the policies of the DOJ.

AHRI does not support recordkeeping and reporting requirements without the inclusion of an allowance for the use of public database, such as the AHRI Directory, as a means for compliance.

Definitions to consider

AHRI has shared language with several states regarding improvements in definitions. These proposals have been largely consistent with the EPA's SNAP 20 & 21 regulations. AHRI's experience with these regulations suggests that the terms "new equipment" "nominal compressor capacity" and "reclaim" have multiple interpretations relating to the commercial refrigeration sector. To resolve potential ambiguities, AHRI proposes adding the following definitions:

"New Refrigeration Equipment" means

1. Any refrigeration equipment system, manufactured after the effective date of this regulation, that is first installed for an intended purpose using new or used components; or
 - a. Additions to existing equipment such that they increase the total nominal compressor capacity of a system after the date at which this sub article becomes effective;
2. Any refrigeration equipment that is modified such that it is:
 - a. Modified to increase the total nominal compressor capacity of a system after the date at which this sub article becomes effective; or
 - b. Replaced or cumulatively replaced after the date at which this sub article becomes effective, such that the capital cost of subsequent service, repair or replacement would exceed 50 percent of the capital cost of replacing the entire refrigeration system based on quoted system replacement cost.

"Nominal Compressor Capacity" means the capacity of the system's compressor(s) based on published ratings in accordance with a recognized standard such as AHRI Standard 540.

"Reclaim" means to reprocess recovered refrigerant to all of the specifications in appendix A of this subpart (based on AHRI Standard 700-2016 or the most recent subsequent version, Specifications for Refrigerants) that are applicable to that refrigerant and to verify that the refrigerant meets these specifications using the analytical methodology prescribed in that standard.

We welcome feedback from MassDEP staff if there are any questions surrounding these recommendations.

A formal exemption process is necessary

Should MassDEP propose regulation, AHRI requests the inclusion of a process to allow for potentially necessary exceptions that may come to light in the future. A good model for this framework is Canada's "essential purpose" permit option included in the Ozone-depleting Substances and Halocarbons Alternatives Regulations (ODSHAR). Low-GWP alternatives and the products that use them are complex. Manufacturers are innovating and developing new products and technologies for a variety of vital applications like commercial refrigeration. As new

uses and technologies come onto the market and as innovation continues, there may be a need to exempt specific products for certain applications. In the ODSHAR, the exception permit clause is intended to allow a person to import, manufacture, use, or sell a substance or product designed to contain a substance if “it will be used for an essential purpose” and a permit is specifically issued. Environment and Climate Change Canada (ECCC) defines “essential purpose” as a purpose requiring the use of a substance or a product containing or designed to contain a substance, when that use is necessary for the health and safety or the good functioning of society, encompassing its cultural and intellectual aspects, and when there are no technically or economically feasible alternatives to that use that are acceptable from the standpoint of the environment and of health.

The ODSHAR essential purpose exemption and definition clause can be reviewed at Part 5 – s.66 (1) and (2). The permitting process is still being finalized by ECCC. We encourage Massachusetts to work with ECCC directly to learn more about the “essential purpose” permitting avenue.¹

Reclaim provisions support emissions reductions

AHRI strongly supports measures to reduce emissions from leaking equipment and proper collection during servicing and at end-of-life as well as the re-use of that refrigerant. This has proven to be one of the most challenging issues to address around the world. Regarding refrigerant management programs (RMP), the Environmental Investigation Agency (EIA) has recently released a comprehensive report of global policies on the reduction of “F-gas banks,” the total quantity of fluorinated gases that have been or are to be produced and will be emitted into the atmosphere unless sustainably managed and disposed.²

As noted in the EIA report, there are pockets of excellence in the recovery of fluorocarbons. For example, the fire suppressants produced more than twenty years ago have been successfully and repeatedly reclaimed around the world and are still in use today. Supermarket retailers participating in the EPA’s *GreenChill* program have annual refrigerant emission rates below 15% compared to the national average of 25%.³ Australia has increased refrigerant recovery to 40% through their program run by the non-profit *Refrigerant Reclaim Australia*.

To support the important goals of emissions reductions, AHRI strongly suggests that MassDEP encourage the use of reclaimed refrigerants through any proposed HFC regulations. Allowing the use of and creating demand for reclaimed refrigerant encourages the proper collection of refrigerant during maintenance and at the end-of-life of equipment. AHRI recommends that MassDEP take affirmative steps to promote reclamation by requiring the use of reclaimed refrigerant in state procurement processes. A strategy that promotes the recovery,

¹ ECCC’s Halocarbons Management Team at ec.gestionhalocarbures-halocarbonsmanagement.ec@canada.ca.

² Search Reuse and Destroy, How States can Take the Lead on a 100 Billion Ton Climate Problem, EIA, https://content.eia-global.org/posts/documents/000/000/829/original/EIAReport_100billiontonclimateopportunity.pdf?1550165022

³ EPA, 2011. *Progress Report: GreenChill – A Partnership at Work*. U.S. Environmental Protection Agency. https://www.epa.gov/sites/production/files/documents/GreenChill_ProgressReport2011_09062012.pdf

reclamation, and re-use of refrigerants directly achieves MassDEP's goal of reducing HFC emissions by eliminating, or at least significantly reducing, the need to service existing systems with newly manufactured product.

Technician training should be a requirement

Training and servicing requirements for technicians will be important considerations for future regulations. AHRI suggests that MassDEP consider including in any proposed regulation a requirement that technicians have refresher training on some frequency as the transition to lower global warming potential refrigerants will most certainly require the use of different American Society of Heating and Refrigeration Engineers (ASHRAE) refrigerant safety classifications than has been historically used.

Sufficient compliance time required

Thank you for providing stakeholders the opportunity to give early feedback on these considered regulations. AHRI urges MassDEP to conduct additional pre-regulatory stakeholder workshops prior to entering into the formal rulemaking process. Massachusetts' formal process, while effective for promulgating regulations from a state perspective, may not allow for full stakeholder engagement necessary on such a complex regulation. Lastly, appropriate compliance time will need to be considered with major rulemakings.

If you have any questions regarding this submission, please do not hesitate to contact me.

Sincerely,



Laura Petrillo-Groh, PE
Lead Regulatory Advisor, Cooling Technology
Direct: (703) 600-0335
Email: LPetrillo-Groh@ahrinet.org