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1001 I Street
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Re: AHRI Comments – California Air Resources Board Proposed Regulation for Prohibitions on Use of Certain Hydrofluorocarbons in Stationary Refrigeration and Foam End-Uses

These comments are submitted by the Air-Conditioning, Heating and Refrigeration Institute (AHRI) in response to the California Air Resources Board (ARB) notice to consider Proposed Regulation for Prohibitions on Use of Certain Hydrofluorocarbons in Stationary Refrigeration and Foam End-Uses posted on January 30, 2018.

AHRI is the trade association representing manufacturers of heating, cooling, water heating, and commercial refrigeration equipment. More than 300 members strong, AHRI is an advocate for the industry and develops standards for and certifies the performance of many of the products manufactured by our members. In North America, the annual output of the HVACR and water heating industry is worth more than \$44 billion. In the United States alone, the HVACR and water heating industry supports 1.3 million jobs and \$256 billion in economic activity annually.

Our comments are regarding ARB's regulatory language proposing to adopt into state regulation provisions from the U.S. Environmental Protection Agency (EPA) Significant New Alternative Policy (SNAP) for new and retrofit stationary refrigeration equipment and certain HFCs used as blowing agents in foam end-uses. AHRI and its members are strong proponents of measures that reduce emissions of high global warming potential (GWP) refrigerants. ARB's number one goal should be to reduce the amount of refrigerant that is vented to the atmosphere. Towards, that end, we applaud ARB's proposed strategy to target emissions of fluorinated gases (F-gases). Several years ago AHRI supported ARB strengthening its regulations on the management of high GWP refrigerants. In addition, AHRI has actively supported industry-led efforts to promote refrigerant management and have partnered with other stakeholders to establish the Global Refrigerant Management Initiative (GRMI). As GRMI's Secretariat, AHRI has convened regular meetings among 11 HVACR associations, which serve as a forum for

discussing refrigerant management challenges and opportunities. AHRI has also partnered with the United Nations Environment Programme (UNEP) to design the Refrigerant Driving License (RDL) supported by an Advisory Committee consisting of nine global HVACR associations. The RDL is an initiative, specifically for Article 5 countries, that aims to introduce a globally recognized qualification for the sound management of refrigerants. We also appreciate the input and resources that ARB has provided to the joint research of next generation refrigerants conducted by our partner association, Air-Conditioning, Heating, and Refrigeration Technology Institute (AHRTI). This research is vital to understanding the real-life application of next generation refrigerants.

AHRI believes that federal requirements and international agreements provide the most effective way to reduce emissions of high GWP refrigerants. Harmonized regulations across North America are more desirable and effective than individual countries or state-by-state efforts which could lead to inconsistent requirements between regions and added costs of compliance being passed to consumers. We agree with the general approach of this Rulemaking and support the current regulatory structure—a consistent, predictable regime administered nation-wide by the EPA managing refrigerants. Further, when looking at adopting EPA SNAP Rules into state regulation, AHRI strongly recommends that ARB consider several additional factors from those outlined in the current proposal:

- ARB should focus on a clearly defined process on managing and regulating the use of acceptable HFC refrigerants.
- ARB should incorporate certain provisions of the Environment and Climate Change Canada (ECCC)¹ final rule published in October 2017.
- ARB should consider a phasedown schedule for the use of certain HFCs.
- Lastly, ARB should acknowledge the existing federal process for acceptable replacements and consider servicing and reclaimed refrigerant scenarios.

PROCESS CLARIFICATION

It is unclear from the proposed regulation how ARB will manage and regulate the use of acceptable HFC refrigerants. In the current proposed regulation, there is no reference to how California will determine or acknowledge acceptable refrigerants. Without clear direction, this could create confusion as manufacturers determine which refrigerants are acceptable alternatives to the list of prohibited substances in Appendix A.² The EPA maintains a list of acceptable refrigerants that provides guidance to manufacturers regarding which refrigerants are legal as replacements for prohibited substances at the federal level.³ Manufacturers need clarification for how California will identify acceptable refrigerants and the process that will be used for that determination. AHRI urges that ARB acknowledge and abide by the EPA's SNAP listing process, which remains a

¹ <http://www.gazette.gc.ca/rp-pr/p2/2017/2017-10-18/html/sor-dors216-eng.php>

² Appendix A: Proposed Regulation: Prohibitions on Use of Certain Hydrofluorocarbons in Statutory Refrigeration and Foam End-Uses

³ Citation

viable program and was unaffected by the recent litigation on related regulations. It is a vital principal of the SNAP program that replacement refrigerants are identified and approved prior to the prohibition of existing refrigerants. Because EPA's regulations remain the law of the land, manufacturers, distributors, and consumers are operating under the expectation that all EPA-approved refrigerants will remain so in California, unless expressly prohibited. It would be helpful for ARB to clarify this legal reality in express terms.

Additionally, ARB has not included any information on the future process for determining prohibited refrigerants beyond those listed in Appendix A⁴ of the proposed regulation. In order to comply and plan for future regulation, manufacturers need clarity on how California will continue to regulate HFC refrigerants in all end-uses.

COORDINATION WITH ENVIRONMENT AND CLIMATE CHANGE CANADA (ECCC)

In the proposed regulation, R-404A would be prohibited for commercial refrigeration stand-alone medium temperature units between 2019 and 2020. AHRI would like to see the prohibition on R-404A delayed one year for stand-alone equipment. This delay would allow EPA the opportunity to approve an acceptable alternative such as R-448A and R-449A&B. AHRI has petitioned EPA for approval of an acceptable replacement in R-448A and R-449A&B. While these refrigerants are not yet EPA SNAP approved for this end use, AHRI is actively pursuing their approval and filed a petition with the EPA in March 2017, and it was expected that EPA would act favorably on this petition in the near future. However, with no acceptable refrigerant currently identified for R-404A, serious market confusion and disruption is likely to occur. In coordinating with the ECCC regulation, ARB should amend its refrigeration regulation to allow for the use of R-448A and R-449A&B in stand-alone medium-temperature applications. These refrigerants have a low GWP and can be retrofitted in R-404A systems. Testing done by manufacturers show a 5 to 10% efficiency improvement over R-404A.⁵ In addition, components compatible with these refrigerants are readily available and the supply chain has reached a level of maturity comparable to R-404A which could significantly reduce the time needed to use these alternatives in this application. We strongly recommend that ARB update the proposed regulation to allow for the use of R-448A and R-449A&B in stand-alone medium-temperature commercial refrigeration applications moving forward. As mentioned above, further clarification on the future process with an emphasis on California allowing refrigerants approved by the EPA would benefit end users and manufacturers when complying with these regulations.

PHASEDOWN SCHEDULE

AHRI also supports a phasedown schedule as opposed to a complete prohibition on use of certain HFCs. Complete prohibitions raise the concern of servicing equipment. The current installed base—i.e. the existing commercial refrigerators, freezers, and

⁴ Appendix A: Proposed Regulation: Prohibitions on Use of Certain Hydrofluorocarbons in Statutory Refrigeration and Foam End-Uses

other application that are currently in use up-and-down the state of California—uses refrigerants that are legal today, but will be prohibited after the regulation goes into effect. Existing products will require servicing. An out-right prohibition will eliminate the ability to repair and service presently installed equipment, the function of which relies on the refrigerant that it was designed to use when it was manufactured. The installed base, including newly installed equipment, will have to undergo a costly replacement, rather than a simple repair. As stated in ARB documents, this proposed regulation could cost a typical business between \$80 and \$254,000 and a small business up to \$14,200. That is significant capital to a business, when also taking into consideration the resources used to purchase the previously installed equipment that will now have to be replaced. A phasedown process with clear benchmarks for repair, reclaimed refrigerant, and retrofit uses would address this issue and provide clarity for equipment with prohibited refrigerants that was installed before the date of prohibition. ARB should address this issue by providing clear guidance on servicing existing equipment. For example, existing systems using prohibited refrigerants should continue to be allowed to operate, serviced and maintained for the remainder of their useful life if installed or retrofitted prior to the effective date as described in Federal Register / Vol. 80, No. 138 / Monday, July 20, 2015.

Additionally, we cannot emphasize enough the importance of exempting reclaimed refrigerant as an essential part of ARB's strategy to reduce HFC emissions. Any ban that does not exempt reclaimed product will leave stranded all existing equipment that relies on a banned refrigerant. We believe that ARB's strategy should not only exempt reclaimed refrigerant but should start with a heavy emphasis on the value of refrigerant reclamation as a means to reduce emissions and we strongly recommend that ARB not just exempt it from future sales bans, but that it look to take affirmative steps to promote reclamation. Every pound of refrigerant that is added to an existing system is replacing a pound that was lost to the atmosphere. A strategy that promotes the recovery, reclamation and re-use of refrigerants directly achieves CARB's goal of reducing HFC emissions by eliminating, or at least reducing, the need to service existing systems with newly manufactured product.

A complete prohibition of the refrigerants listed in Appendix A⁶ de facto outlaws all retail food refrigeration equipment in the state of California. By ostensibly de-listing a refrigerant without a replacement in some applications, ARB is creating an untenable gap. The production of new equipment is dependent on several factors, including available components, certainty with regulations, and market desire – all of which take a significant amount of time and research. Manufacturers must develop, demonstrate, test, and evaluate new equipment, and then retool their lines to manufacture it. Additionally, commercial refrigeration equipment must pass national sanitation standards. Therefore, a complete prohibition on September 1, 2018 on specific refrigerants could prevent any equipment from being sold in California and prevent any repairs of existing equipment.

⁶ Appendix A: Proposed Regulation: Prohibitions on Use of Certain Hydrofluorocarbons in Statutory Refrigeration and Foam End-Uses

A phasedown schedule better reflects market realities and gives manufacturers a reasonable timeline to develop new technology for compliance. A delay in all new rules until Jan 1, 2019 would give industry 9 months to adapt and it would prevent the need to change dates of phase out currently scheduled for Jan 1, 2019.

Training and servicing requirements for technicians will need to be important considerations for this future regulations a component of any specific refrigerant prohibition.

DEFINITIONS

AHRI feels the definition of “New Refrigeration Equipment” is broad and difficult to enforce. The definition includes the mention of a full charge increase, but an “increase” is not defined. With an arbitrary charge increase absent a measurement, fixing or updating a component of a system could require a whole new system and refrigerant to be used.

Additionally, part (ii) of the definition of “New Refrigeration Equipment” is not consistent with EPA’s and creates serious confusion and doubt when repairs are made not knowing the future operation of the equipment. As mentioned in other comments, these can become very expensive for an end user and manufacturer. The full definition for “New Refrigeration Equipment” should align with the federal definition.

There is also no definition for repair included in the rulemaking. AHRI suggests the use of EPA’s definition found in 40 CFR 82.152 – Definitions “Provided the equipment being installed has the same capacity and provides the same function as the original equipment, the EPA considers this as a system repair. As such, the system can continue to use the delisted refrigerant.”

ENFORCEMENT REQUIREMENTS

The requirements for recordkeeping are overly burdensome on manufacturers. AHRI manufacturers sell to a global market that requires sophisticated recordkeeping meant to make their operation and business operate at maximum efficiency. Additional requirements by one state can disrupt this process and create unnecessary burdens on their business.

AHRI members operate in a supply chain where equipment is shipped around the globe on a daily basis. The equipment is often not shipped to the direct end-user. Distribution centers and contractors play a role in delivering the good to the end user. Included in ARB’s initial statement of reason in the staff report, is the assumption that “affected businesses already keep all the records that will be required for the record-keeping provision, thus there is no additional recordkeeping cost”. While in fact, many businesses do not keep the statements and records that this regulation will now require. Many of the products that are manufactured by our members do not reach California through the initial sale. These products instead enter into the market and are distributed

geographically. As currently outlined, all documentation requirements will also not be known for all equipment as some of these pieces are just components of the full system and will not individually contain all refrigerant and charge information. Placing these unnecessary record keeping requirements on manufacturers does come at a cost and does not improve the enforcement of these regulations.

Sales records that manufacturers do keep is confidential business information and should not be required to be disclosed in any circumstance. Confidential business data must be protected. Customer lists, market shares, and product selections are important proprietary business data. Creating a single point source for this information can be very harmful to all levels of product distribution and installation but particularly for overburdened small business interests.

The disclosure requirement that CARB has proposed is also unnecessarily long. A more simple disclosure statement could read: “This equipment complies with California Code #####).

Additionally, nowhere in this regulation is the issue of install vs manufacture date addressed. As written, if a piece of equipment is ordered, manufactured, and shipped before the enforcement date, that equipment will not be allowed to be installed if it arrives after the enforcement date. This disrupts the production chain, which sometimes requires months of planning and actual manufacturing. These orders can also include sophisticated, custom built equipment that meets an individual customer’s needs for a specific end use. Equipment manufactured before the date of enforcement should be allowed to enter the marketplace and be installed.

AHRI appreciates the opportunity to provide these comments. If you have any questions regarding this submission, please do not hesitate to contact me.

Sincerely,

Garrett McGuire

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Air-Conditioning, Heating, and Refrigeration Institute