



Shaping Tomorrow's
Built Environment Today

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Ms. Cynthia Newberg
Director
Office of Atmospheric Protection, Stratospheric Protection Division
U.S. Environmental Protection Agency
1200 Pennsylvania Avenue, NW
Washington, DC 20460

RE: Proposed Rulemaking on Phasedown of Hydrofluorocarbons: Restrictions on the Use of Certain Hydrofluorocarbons Under Subsection (i) the American Innovation and Manufacturing Act of 2020 (Docket ID No. EPA-HQ-OAR-2021-0643)

Dear Director Newberg:

ASHRAE is submitting this response to the U.S. Environmental Protection Agency's (EPA) Proposed Rulemaking on Phasedown of Hydrofluorocarbons: Restrictions on the Use of Certain Hydrofluorocarbons Under Subsection (i) of the American Innovation and Manufacturing Act of 2020. We are pleased EPA is working to complete the phasedown of hydrofluorocarbons (HFCs), fulfilling its domestic responsibility under the AIM Act, and its international responsibility to the Kigali Amendment. ASHRAE is committed to the orderly and safe phasedown of high-GWP HFC refrigerants.

ASHRAE, founded in 1894, is a technical society advancing human well-being through sustainable technology for the built environment. The Society and its more than 51,000 individual members – comprising engineers, academics and other professionals in the buildings industry – focus on building systems, energy efficiency, indoor air quality, refrigeration and sustainability within the industry. Through research, standards writing, publishing, certification and continuing education, ASHRAE shapes tomorrow's built environment today.

HFCs are commonly used for cooling and refrigeration, but are also seeing increasing use for heating with the emergence of heat pump technologies for homes and commercial buildings. ANSI/ASHRAE Standards 15 and 34 provide essential guidance to manufacturers, design engineers and operators who need to stay

current with new air conditioning and refrigerating requirements. ANSI/ASHRAE Standard 15-2022, *Safety Standard for Refrigeration Systems*, specifies the safe design, construction, installation, and operation of refrigeration systems. Additionally, ANSI/ASHRAE Standard 15.2-2022, *Safety Standard for Refrigeration Systems in Residential Applications* accommodates the use of A2L-classified refrigerants in low-rise residential applications and is intended for use by manufacturers, installers, contractors, service technicians, building code officials, and others. ANSI/ASHRAE Standard 15-2022 is used in conjunction with ANSI/ASHRAE Standard 34-2022, *Designation and Safety Classification of Refrigerants*, which specifies refrigerant properties and a refrigerant classification system. It assigns safety classifications, lower flammability limits, and refrigerant concentration limits based on toxicity and flammability data.

We hope the information provided below helps EPA successfully implement its plans to phasedown HFCs.

Responses to Requested Information

EPA is seeking comment on the Agency's [interpretation of safety](#) and its potential impact on availability of substitutes and the effect of switching to substitutes on worker and consumer safety in the subsectors affected by this proposed action.

ANSI/ASHRAE Standards 15, 15.2, and 34 are under a process of continuous maintenance. As such, these standards are actively being revised on an ongoing basis to address the safe application of new refrigerants being developed for use in refrigeration and air conditioning applications. In addition, because ASHRAE is an ANSI Audited Designator, the development and revision of the standards follows a consensus process which ensures broad stakeholder input and thorough vetting prior to publication. The importance of state and local building codes and/or regulatory requirements to synchronize and update their requirements with the latest editions of ASHRAE Standards 15, 15.2, and 34 as they evolve cannot be overemphasized.

In its evaluation of the safety subfactor under subsection (i)(4)(B), EPA is also considering the safety group classification of refrigerants as designated by the ASHRAE Standard 34.

The use of ANSI/ASHRAE 15 and 34 standards as a component of safety evaluation in the proposal is a valid approach. These standards are revised continuously to address safe application of refrigerants in the refrigeration, air conditioning, and heat pumps (RACHP) sector and follows a consensus process with broad stakeholder input for the revisions. Based on their development and revision process, the use of these standards as a component of safety evaluations provides a consensus view of a wide group of experts in the RACHP sector on the safe application of refrigerants. The editions of ANSI/ASHRAE standards referenced in the TSD are 2019 editions that have been superseded by the 2022 edition that includes some revisions beyond the 2019 edition. It is recommended that the safety evaluation be updated to include the latest edition of these standards.

EPA is seeking comment on to what extent EPA can take into account building codes recognizing that they vary based on local circumstance.

ASHRAE believes that the EPA should consider the status of the building codes when setting transition timelines for the RACHP sector. We also believe that further interaction between the EPA and code authorities could help improve state and local code adoption, by helping to bring them up to speed on why the EPA is making these changes. However, we also believe that consideration of the building codes should be independent of the listing of acceptable substitutes.

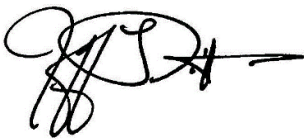
EPA is taking comment on and seeking data and information regarding the prevalence of retrofitting in stand-alone units. EPA is also seeking comment on what refrigerants are commonly used in retrofitted stand-alone units, and what is a reasonable GWP limit to set for these units. EPA is also seeking comment on whether there are substitutes to HFCs that are commonly used in retrofitted remote condensing units, and what substitutes are commonly used in retrofitted supermarket systems.

ASHRAE does have the specific information requested by the EPA. However, the EPA should be aware that there are some limitations on retrofits. ASHRAE 15.2 does not permit retrofits with a refrigerant of a different safety group than the original. ASHRAE 15 does allow retrofits with a different safety group, but requires the system meet all the requirements of that group as if it were a new installation. Further, the change must have the approval of the authority having jurisdiction.

EPA is seeking comment on whether the Agency should provide an exception for room AC products with a capacity over 25,000 Btu/hr, or some other threshold, and any issues that these products may face in using substitutes with GWPs less than 700.

ASHRAE does not take a position as to whether the EPA should provide an exception for room AC products with a capacity of more than 25,000 Btu/h. However, we do note that UL 60335-2-40 Household and Similar Electrical Appliances - Safety - Part 2-40: Particular Requirements for Electrical Heat Pumps, Air-Conditioners and Dehumidifiers provides a path to compliance for such equipment.

Thank you for the opportunity to provide recommendations to EPA to ensure the orderly and safe phasedown of High-GWP HFC refrigerants. Please do not hesitate to contact me for more information, or have your staff contact GovAffairs@ashrae.org. Thank you again for your consideration of our comments.



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