



Shaping Tomorrow's  
Built Environment Today

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**Sheila J. Hayter, P.E., FASHRAE**  
President

Reply to: Nat'l Renewable Energy Lab  
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November 14, 2018

The Honorable Andrew Wheeler  
Acting Administrator  
U.S. Environmental Protection Agency  
1200 Pennsylvania Avenue, N.W.  
Washington, DC 20460

ATTN: Docket ID No. EPA-HQ-OAR-2017-0629

Dear Acting Administrator Wheeler:

In response to the U.S. Environmental Protection Agency's (EPA) Proposed Rule, "Protection of Stratospheric Ozone: Revisions to the Refrigerant Management Program's Extension to Substitutes," published in the Federal Register on October 1, 2018, ASHRAE respectfully submits the following comments.

ASHRAE, founded in 1894, is a non-profit engineering society of more than 56,000 members worldwide, including 39,000 in the U.S., who focus on building systems, energy efficiency, indoor air quality, refrigeration and sustainability. Through research, standards writing, publishing, certification and continuing education, ASHRAE advances human well-being through sustainable technology for the built environment. The Society also focuses on public safety and health concerns and provides guidance for a safe environment during extraordinary events.

Refrigeration and air conditioning provide many benefits to society, but these benefits have environmental and societal consequences. Many of these consequences stem directly from the refrigerant chosen and its management during the life of the equipment. For example, refrigerant emissions from air conditioning and refrigeration systems occur during installation, replacement and maintenance, as well as a result of malfunctions or breakage.

Because of this, ASHRAE promotes the responsible use of refrigerants during the processes of design, manufacturing, operation, and servicing of systems as well as at the end of life. ASHRAE also supports and is committed to the efforts to advance technologies that minimize the impact on the environment while enhancing performance, containment of refrigerants, cost-effectiveness, and safety of employees and the public.

ASHRAE is concerned about how EPA's proposed rule may diminish requirements that support proper handling and containment of refrigerants. As such, ASHRAE believes that HFC refrigerants should not be excluded from proper management and handling.



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ASHRAE's "Position Document on Refrigerants and Their Responsible Use" includes the following recommendations, which we hope EPA will take into consideration:

*Improved Design and Equipment Applications*

- Balance the safety, energy efficiency, cost, and environmental impacts of refrigerants using a consistent and comprehensive methodology across all refrigerants and system types using benchmarks like LCCP or TEWI.
- Advance the design and development of refrigeration and air-conditioning equipment that facilitate reduced refrigerant charge and emissions.
- Develop tools, equipment, methodologies, and practices to minimize or prevent refrigerant loss during installation, operation, maintenance, and decommissioning of refrigeration systems.

*Improved Field Practices and Training*

- Introduce and manage on-site emission prevention measures including, but not limited to, improved system tightness for leak prevention, good commissioning and installation practices, regular leak checking, monitoring, labeling, and record keeping. These elements can be incorporated as part of a comprehensive refrigerant management program.
- Establish programs that promote refrigerant recovery, recycling (reuse), reclamation, and safe disposal practices, including at the end of equipment life.
- Develop and enact certification programs for specialists (practitioners) in relation to setting benchmarks and competencies of good practices.
- Promote the introduction of corporate social responsibility policies and programs in relation to the responsible use of refrigerants.
- Introduce training programs about lower GWP refrigerants and their responsible use for different stakeholders.

Thank you for your consideration of our comments. ASHRAE welcomes the opportunity to speak further with you or your staff about our comments on the proposed rule. To schedule a meeting, please feel free to contact me or ASHRAE's government affairs staff at [GovAffairs@ashrae.org](mailto:GovAffairs@ashrae.org). We look forward to helping EPA carry out its mission to protect human health and the environment.

Sincerely,

A handwritten signature in black ink that reads "Sheila J. Hayter". The signature is written in a cursive, flowing style.

Sheila J. Hayter, P.E.  
ASHRAE President