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Breaking Down the EPA's Final Rule to Cut HFCs

ATLANTA—In late September, the U.S. Environmental Protection Agency (EPA) issued a final rule establishing a comprehensive program to cap and phase down the production and consumption of climate-damaging hydrofluorocarbons (HFCs)—potent greenhouse gases commonly used in refrigeration and air-conditioning equipment.

“This means the U.S. will begin the phasedown of HFCs next year in line with the Kigali Amendment to the Montreal Protocol,” said Nanette Lockwood, P.E., Member ASHRAE, member-at-large for ASHRAE’s Government Affairs Committee, and Steve Kujak, Member ASHRAE, chair of ASHRAE Standing Standard Project Committee 34, Designation and Safety Classification of Refrigerants.

This final rule is set to phase down the U.S. production and consumption of HFCs by 85% over the next 15 years, as mandated by the American Innovation and Manufacturing (AIM) Act that was enacted in December 2020.

The rule specifically reduces production and bulk consumption of high global warming potential (GWP) refrigerants by 10% in 2022 and 2023, according to Kujak and Lockwood.

“This means refrigerant producers will be required to alter the refrigerants produced to reduce the higher GWP refrigerant volumes in favor of those with lower GWP. The next reduction is another 30% and starts in 2024,” they said, adding that another rule is anticipated to be developed over the next year to address the restrictions on the use of higher GWP refrigerants beginning in 2024.

As the U.S. is adhering to the schedule for the Kigali Amendment to the Montreal Protocol, the availability of high GWP refrigerants is expected to decrease.

“As high GWP HFCs become less available, lower GWP refrigerants will become more available and preferred solutions. It is likely that impacts to the marketplace, as the result of the 10% reduction, will be low given many low GWP refrigerants are already widely available and used in products today,” they said.

In order to be prepared for the next stepdown in 2024, Lockwood and Kujak said ASHRAE members should become more educated on next-generation lower GWP refrigerants and associated products.



Nanette Lockwood, P.E.,
Member ASHRAE



Steve Kujak,
Member ASHRAE

The EPA estimates the total emission reductions as a result from the rule from 2022 – 2050 could be the equivalent of 4.6 billion metric tons of carbon dioxide (CO₂), which is about equal to three years of U.S. power sector emissions at 2019 levels. In 2036 alone—the year the final reduction step is made—the rule is expected to prevent emissions that are about equal to the annual greenhouse gas emissions from one out of every seven passenger vehicles registered in the U.S. ■

Demystifying Building Decarbonization

Building decarbonization is an industry trend, talking point and hot topic. But what does it all mean?

Donald Colliver, Ph.D., P.E., Presidential/Fellow/Life Member ASHRAE, and Thomas Phoenix, P.E., BEMP, Presidential/Fellow/Life Member ASHRAE—the co-chairs of ASHRAE’s Task Force for Building Decarbonization—define decarbonization, talk about the plausibility of carbon goals and dispel common myth and misconceptions on the latest *ASHRAE Journal* Podcast episode.

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