

Understanding hydrofluorocarbons and their impact

Hydrofluorocarbons, or HFCs, are greenhouse gases made of hydrogen, fluorine, and carbon. They're commonly used in air conditioning, refrigeration, foam insulation, and aerosol propellants

In the 1980s and 1990s, HFCs became popular as an alternative to CFCs, which were harming the ozone layer. HFCs were introduced for use in refrigeration, air conditioning, aerosol propellants, and foam production, areas where CFCs had previously been used. Unlike CFCs, HFCs do not deplete the ozone, making them a safer option. However, they are known as "climate super pollutants" because they are thousands of times more powerful than carbon dioxide in trapping heat. As global temperatures rise, the demand for cooling increases, making HFCs the fastest-growing source of greenhouse gas emissions. Reducing HFCs helps protect the climate and create a healthier future.

HFC usage restrictions

As required by state law, Ecology adopted a rule in November 2023 that restricts certain HFCs and requires a transition to less-damaging refrigerants.

This rule applies to anyone who manufactures, sells, leases, rents, or brings new products or equipment containing HFCs into the state of Washington.

Failure to comply could result in a penalty of up to \$10,000 per day per violation. The rule not only bans certain HFCs but also limits the use of other refrigerants based on their Global Warming Potential (GWP).

This document highlights restricted end-use products and their effective dates under <u>WAC 173-443-040</u> to clarify the listed restrictions.

Questions

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Accessibility

To request an ADA accommodation, contact Ecology by phone at 564-233-1616 or email at Heather.Curtis@ecy.wa.gov, or visit

https://ecology.wa.gov/access ibility. For Relay Service

HFC usage restrictions

1- For details on the specific HFCs restrictions, refer to WAC 173-443-040. 2- For details on the Global Warming Potential (GWP) restrictions, refer to WAC-173-443-040.

*Most effective dates begin on January 1, unless listed otherwise. Earliest effective date listed. For more information on other effective dates, refer to WAC-173 443 040

End use	Specific HFCs ¹	GWP restriction ²
Products		
Aerosol Propellants	2020	No restriction
Foam	2020	No restriction
Small containers of refrigerant	No restriction	July 25th, 2021*
Nonessential Consumer Products	No restriction	July 25, 2021*
Refrigeration equipment		
Household refrigerators	2020	No restriction
Stand alone units	2020	No restriction
Automatic commercial ice machines	2025	No restriction
Food processing and dispensing equipment	2021	No restriction
Vending machines	2022	No restriction
Commercial refrigeration		
Retail food refrigeratoon	2020	2025
Cold storage	2023	2025
Industrial process refrigeration	No restriction	2025
Air conditioning equipment		
Chillers used for air conditioning	2024	No restriction
Room air conditioners	No restriction	2024
Variable rate flow	No restriction	2026
Other air conditioning	No restriction	February 2027*

 $Figure. 7_i. HFC. usage. restrictions. under. WAC. 7 \textcircled{90} \underline{009} \underline{606?} detailing. prohibited. end. uses ?specific. hydrofluorocarbon. (HFC). bans? and. Global. Warming. Potential. (GWP). limits. with. their. effective. dates;$