

# Focus on: Hydrofluorocarbons



Figure 1. Large air-conditioning unit containing hydrofluorocarbons (HFCs)

## What are Hydrofluorocarbons?

Hydrofluorocarbons (HFCs) are a type of fluorinated gas commonly used in refrigeration and air conditioning. HFCs gained popularity in recent decades as a replacement for chlorofluorocarbons, which were known to be depleting the Earth's ozone layer. Now HFCs are building up in the atmosphere quickly and contributing to the greenhouse gas (GHG) emissions linked to climate change. In fact, this class of short-lived "super pollutant" can be thousands of times more potent than carbon dioxide, giving HFCs a disproportionate impact on the global climate crisis.

HFCs are used as refrigerants, aerosol propellants, in foams, solvents, and fire retardants. In Washington, HFCs account for about 4% of the state's overall greenhouse gas emissions. Emissions occur when these items age and start to leak, when improperly maintained, and when disposed of at the end of their useful life. With an increasing need for people to stay cool in a warming world, HFCs are the fastest growing GHG in the world.

## How Washington is Transitioning from HFCs

Ecology rules currently reduce statewide HFC emissions from insulating foams and new commercial and residential refrigeration under a state law passed in 2019.

In May 2021, Governor Jay Inslee signed House Bill 1050. This expands on the 2019 HFC restrictions and will continue ushering in more climate-friendly refrigerants for new equipment. Additionally, the 2021 HFC law makes Washington only the second state to reduce emissions from existing equipment. Under the new law, Ecology will:

- Establish a Refrigerant Management Program to address GHG emissions from large air conditioning and refrigeration equipment
- Set a maximum "global warming potential" (GWP)\* for HFCs used in:
  - New stationary air conditioning equipment
  - New stationary refrigeration equipment.

Beginning July 25, 2021, the new law prohibits the sale and purchase of small cans of high-GWP HFC refrigerants and nonessential consumer products (e.g., air horns, noisemakers) containing high-GWP refrigerants.

\*GWP measures how much heat a greenhouse gas traps in the atmosphere compared to carbon dioxide.

### Reaching Our Reduction Target

HFC emission reductions are key to achieving the state’s overall goal of reducing GHG emissions to net zero by 2050. When combined with complementary federal laws, we project a 75% reduction in Washington HFC emissions by 2035.

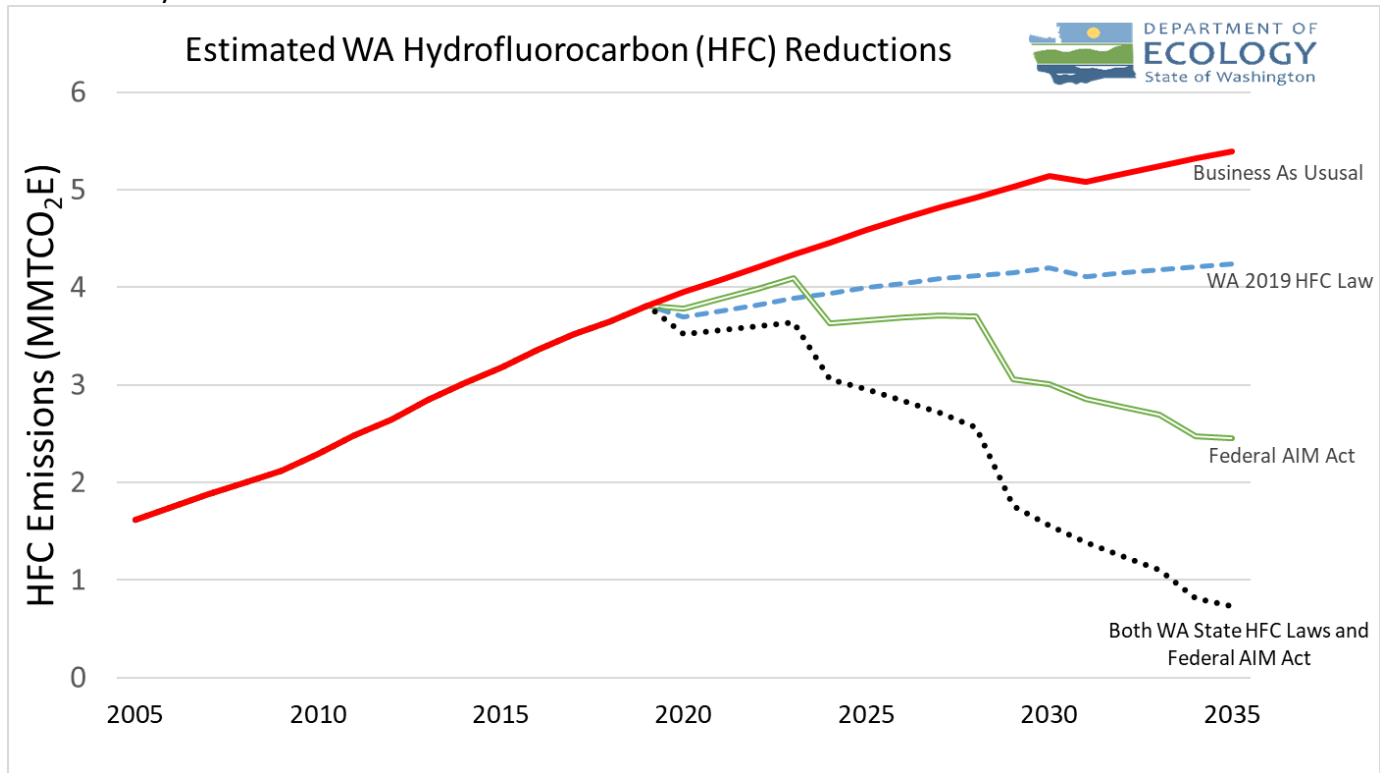


Figure 2: Projected hydrofluorocarbon emission reductions in Washington through implementation of new laws. Emissions measured in million metric tons of carbon dioxide equivalent (MMTCo<sub>2</sub>E)

This Rulemaking Amends the following:	Announce Rule:	Propose Rule:	Adopt Rule:
	<ul style="list-style-type: none"> <li>Chapter 173-443 WAC—Hydrofluorocarbons (HFCs)</li> <li>Chapter 173-455 WAC—Air Quality Fee Rule</li> </ul>	August 2021	Summer 2023



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To request an ADA accommodation, contact Ecology by phone at 360-407-6831 or email at marilyn.turnbow@ecy.wa.gov, or visit <https://ecology.wa.gov/accessibility>. For Relay Service or TTY call 711 or 877-833-6341.