

Essential American Innovation and Manufacturing (AIM) Act Details for HVAC Professionals

What is the AIM Act?

The American Innovation and Manufacturing Act directs the Environmental Protection Agency (EPA) to address hydrofluorocarbons (HFCs) by providing the EPA with new authorities to:

- Phase down the production and consumption of listed HFCs
- Manage listed HFCs and their substitutes
- Enable transition to next-generation technologies

The phase-down of HFCs will impact the HVAC industry dramatically, resulting in the need for new, low global warming potential (GWP) refrigerants

Leading low-GWP candidates

Most states are setting a maximum GWP value of 750. This makes two refrigerant choices the most favorable to replace R-410A: **R-32** and **R-454B**. **YORK® selected R-454B as its A2L (lower-flammability) refrigerant of choice in all unitary (residential, light commercial/applied) products.**

Benefits of selecting R-454B

- Lowest-approved GWP (466) makes R-454B more futureproof for potential future minimum requirements
- Greater environmental/sustainability benefits and credits compared to other low-GWP refrigerant options
- Closest performance to R-410A with the shortest learning curve for use
- Lower discharge pressure and slower flame propagation rate when compared to R32
- Superior heat pump heating performance compared to other low-GWP options
- Improved scale and availability in the future due to current competitor preference in utilizing R-454B

How are the “best” new refrigerants chosen – and why won’t R-410A remain a viable option?

As the focus on refrigerants has changed from ozone depletion potential (ODP) to global warming potential (GWP), new options must be explored and vetted for low-GWP potential. Some new low-GWP fluids, now referred to as HFOs or hydrofluoroolefins, have proven to have low GWP and, in some cases, low or zero ODP.

Today’s dominant unitary refrigerant, R-410A, is considered a highly potent greenhouse gas due to its high GWP value (2,088).

Why is a refrigerant transition necessary?

Previous refrigerant transitions focused on **ODP**, identifying refrigerants that thinned the ozone layer for phase-out in favor of options that were less harmful to the ozone. The most recent transition focuses on **GWP**, or a refrigerant's ability to inhibit heat radiating from the Earth to escape the atmosphere.

How to prepare now and what's next

The AIM Act will result in a decrease of available HFC starting in 2024, but distributors and contractors should begin preparing for the phase-down and new refrigerant use before that time.

How to prepare and what to expect

- Start training on flammable refrigerants now (ACCA, ESCO, JCI)
- Expect price increases on R-410A, R-134a and other high-GWP HFC refrigerants
- The use of and return of refillable cylinders will be mandatory starting January 1, 2025
- Existing equipment and equipment manufactured up to December 31, 2023, can continue to use refrigerants like R-410A and R-134a as long as refrigerants are available
- Know the building codes of your area (UMC, IMC, IRC, etc.)
- Understand UL 60335-2-40 and ASHRAE 15/15.2p – calculate conditioned space volumes and critical refrigerant charges
- Update your EPA Section 608 licenses and review the new AIM Act requirements
- Upgrade any service equipment that isn't A2L-compatible
- Contact your regional YORK® representative with any questions you might have, or visit [YORK.com/refrigerants](https://www.york.com/refrigerants) to learn more

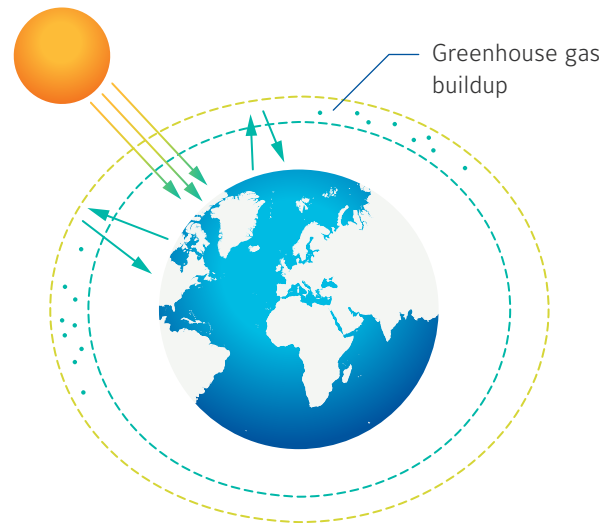
Ozone Depletion

Thinning at poles



Global Warming

Trapping of heat



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