

August 31, 2023

Rulemaking - Public Comment Period for Hydrofluorocarbons (HFCs) and Other Fluorinated Gases

Submitted via aq.ecology.commentinput.com 173-443 WAC Hydrofluorocarbons (HFCs)

EIA appreciates this opportunity to submit comments to the Washington Department of Ecology on its proposed rule, 173-443 WAC Hydrofluorocarbons (HFCs) And Other Fluorinated Greenhouse Gases. The [Environmental Investigation Agency](#) (EIA) is an independent non-profit campaigning organization dedicated to identifying, investigating, and implementing solutions to the world's most pressing environmental problems. Our climate campaign focuses on reducing the climate impact of the cooling sector by eliminating reliance on polluting gases, promoting refrigerant management best practices, and exposing related illicit trade.

We support these proposed requirements to reduce the emissions of HFCs and other fluorinated greenhouse gases and appreciate the Department of Ecology team holding many stakeholder workshops on the implementation of regulations to reduce HFCs. Continued state leadership on HFCs is vital to support national implementation of the AIM Act and help meet greenhouse gas emission reduction targets. Washington state sends a strong signal for the rest of the country of what is needed to help meet the demand reduction to 40% below the baseline required nationally under the AIM Act on January 1st, 2024 and beyond.

Transitioning to ultra-low GWP (<5) refrigerants in all new cooling equipment by 2030, will be essential to meeting net-zero climate goals by mid-century and to prevent locking in refrigerant emissions in equipment that will be installed for decades to come. Washington state should also prioritize future actions to further lower GWP limits in the air conditioning and heat pump sectors, and take a cautious approach to the adoption of hydrofluoro-olefins (HFOs), which meet the broader definitions of per- and poly- fluor-alkyl substances (PFAS), and have the potential to contribute significant breakdown into persistent degradation by-products including trifluoroacetic acid (TFA). The state should take a vigilant stance on advancing proactive monitoring and scientific study of the contribution of HFOs and other sources to TFA pollution and consider limiting non-essential uses of PFAS refrigerants.

As follows are EIA's comments on the proposed rulemaking:

New Refrigeration Equipment

EIA recognizes the comprehensive definition of "new refrigeration equipment" and supports efforts to discourage the mid-GWP step-down for refrigeration systems and discourage investment in systems using HFC-HFO blends with GWPs ≥ 150 . The 2025 effective dates for both new facilities and retrofits for supermarkets in particular are practical and achievable with the technology currently available. We also support Washington going above and beyond the proposed EPA Technology Transition rule in requiring the 150 GWP limit for all equipment >50lbs, rather than continuing to allow the proliferation of up to 300 GWP refrigerants in cascade/indirect systems and 50 to 200lb systems. The natural refrigerant options below 150 are sufficient to meet the needs of these applications and we appreciate the clarity of signal that the state is sending to the market.

Leak Detection and Monitoring Requirements

We appreciate the efforts Ecology has taken to prioritize best practices for preventing refrigeration leaks through inspections, automated systems, and requiring repairs or replacement action with specific timelines. EIA has extensive experience in this area through our investigative work uncovering climate pollution across the country using best-in-class leak detection equipment to raise awareness about the refrigeration gases leaking in grocery aisles.¹

Industrial Process Refrigeration Leak Thresholds

EIA supports the reduction of leak rate thresholds and notes significant improvement over EPA 608 program thresholds. We encourage Washington to strongly consider setting a time frame to revisit and potentially further lower the leak thresholds over time as technologies and best practices continue to evolve and improve. This especially applies to the proposed leak rate threshold of 24% for industrial process refrigeration systems which is quite high.

Leak Inspections and Methods

EIA supports the proposed requirements for consistently scheduled leak inspections. We recommend the methods for detection be worded to clarify a requirement to use a calibrated refrigerant leak detection device, with a bubble test or other method such as observation of fluids used as additional method(s) to further locate a leak when necessary. The bubble test and/or an inspection for oil residue alone are not sufficient to detect the presence of odorless and colorless refrigerant leaks.

Proposed Detection Thresholds for ALDS

EIA commends Ecology's plans to institute detection thresholds for direct and indirect leak detection systems. For direct systems, the size of the system and placement of the detection sensors are key to quickly and accurately recognizing leaks. Additionally, our *Leaking Havoc* investigations have demonstrated that many leaks are under 10 ppm.² While small in concentration at any single location, even small concentrations have the potential to lead to major leaks over time. EIA supports a threshold to alert the operator and technology available today allows for notification well before concentrations reach the proposed 100 ppm threshold.

EIA supports the proposed requirements for systems with a full charge of 1,500 pounds or more to install ALDS by January 1, 2025, unless the facility will transition the refrigeration system to a low-GWP refrigerant (<150) before January 1, 2027. Indirect systems are more effective at preventing refrigeration charge loss and detecting leaks and have been shown to reach leak rates of 5% according to ALDS manufacturer Hussmann.³ Current technology demonstrates these maximum leak thresholds of 50 lbs of refrigerant or 10% of the full system charge are fully achievable.

Introduce a Time Limit on Sell-through

The compliance dates in the proposed rule provide sufficient time for equipment manufacturers and distributors to plan for the transition and sell existing inventories and for end-users to select cost-effective options with low-GWP refrigerants. At most, a one-year period for the sale of existing inventory and long-term projects is needed, not an indefinite period. Allowing an indefinite period for the sell-through

¹ <https://www.climatefriendlysupermarkets.org/leaking-havoc-series>

² <https://www.climatefriendlysupermarkets.org/leaking-havoc#RCTA>

³ https://www.epa.gov/system/files/documents/2022-04/gc-webinar-data-driven-leak-reduction-2022-04-12_0.pdf

of equipment manufactured before compliance dates would complicate enforcement with efforts to verify the manufacture date. EIA recommends Washington be consistent with EPA's proposed rule and limit the sell-through period to one year.⁴

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⁴ <https://www.regulations.gov/docket/EPA-HQ-OAR-2021-0643>