



## **Rulemaking - Informal Public Comment Period for Hydrofluorocarbons (HFCs) and Air Quality Fee Rule**

Submitted via [aq.ecology.commentinput.com](http://aq.ecology.commentinput.com) (Hydrofluorocarbons (HFCs) – Chapter 173-443 WAC & Air Quality Fee Rule – Chapter 173-455 WAC)

EIA appreciates this opportunity to submit comments to the Washington Department of Ecology on its proposed rules, Hydrofluorocarbons (HFCs) – Chapter 173-443 WAC & Air Quality Fee Rule – Chapter 173-455 WAC. The [Environmental Investigation Agency](http://www.environmentalinvestigationagency.org) (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. EIA also urges the Department of Ecology to consider additional rulemakings as ultra-low GWP equipment and/or reclaimed materials become more widely available to replace controlled substances in new equipment. Our recommendations focus on the definition of new refrigeration, support for strengthening leak detection standards, improvements to the CARB R3 reporting system, and a proposed sell-through time restriction.

### **New Refrigeration Equipment**

EIA recommends two key amendments to the proposed definition of “new stationary refrigeration equipment.” The first is to more closely align with California’s HFC restrictions by including a time-bound component to system repairs or upgrades. It is essential to ensure equipment cannot be replaced in small increments, unnecessarily prolonging the use of high-GWP refrigerants in aging systems in order to avoid triggering the requirement for a transition to a low-GWP system.

Secondly, EIA supports Washington Department of Ecology’s efforts to discourage the mid-GWP step-down for refrigeration systems and discourage investment in systems using HFC-HFO blends with 100-yr GWPs of 600-1400. However, we are concerned that the proposal to limit all retrofits of existing systems may lead to longer use of R-404A particularly in newer refrigeration systems that end-users are unlikely to fully replace with a low-GWP system until it has reached the end of its expected life. This could disproportionately impact small businesses. For example, it would be costly if a newer system exceeds the leak repair threshold with a chronic leak and the company is required to replace a system to comply with the state’s new RMP mandates to retrofit/replace a chronically leaking system. Therefore, EIA believes this retrofit restriction should apply particularly to aging systems that are especially cost-effective for retailers to replace and have exceeded their assumed lifecycle of at least 15 years.

Specifically, we recommend the following amended language changes to the definition **in bold**:  
 “A system in an existing facility used for commercial refrigeration or industrial process refrigeration that is:

- (a) Retrofit, as defined in WAC 173-443-030; **15 or more years after being first installed or significantly modified consistent with clause (b) below, whichever occurred more recently**; or
- (b) Modified such that the system undergoes cumulative replacements, **within any three-year time period**,<sup>1</sup> of 75 percent or more of its evaporators (by number) and 100 percent of its compressor racks, condensers, and connected evaporator loads.”

### **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.<sup>2</sup>

### Industrial Process Refrigeration Leak Thresholds

While EIA supports the reduction of leak rate thresholds and notes the significant improvement over EPA 608 program thresholds, Washington should 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. Certain leak thresholds are still very high, particularly the proposed leak rate threshold of 24% for industrial process refrigeration systems.

### January 1, 2024 Leak Inspection Frequency Requirements and Methodology

The proposed requirements would be improved with more frequent inspections required for small (50 – 199 lbs.) and medium (200 – 1,499 lbs.) systems. Annual inspection requirements for small systems are unlikely to achieve any preventative impact as a slow leak may result in losing a large proportion of the charge over several months to a year. We recommend more frequent inspections for systems without ALDS: specifically that medium and large systems both require monthly inspections and small systems require quarterly leak inspections. We also 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 supports 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 is key to quickly and accurately recognizing leaks. Additionally, our *Leaking Havoc* investigations have demonstrated that many leaks are under 10 ppm.<sup>3</sup> While small in concentration at any single location, even small concentrations have the potential to lead to major leaks over time, and ideally, companies

<sup>1</sup> <https://ww2.arb.ca.gov/sites/default/files/barcu/regact/2020/hfc2020/frorevised.pdf>

<sup>2</sup> <https://www.climatefriendlysupermarkets.org/leaking-havoc-series>

<sup>3</sup> <https://www.climatefriendlysupermarkets.org/leaking-havoc#RCTA>

should respond to leaks over 2-3 ppm. EIA recommends Ecology set a maximum threshold of 10 ppm to trigger an alarm.

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.<sup>4</sup> Since current technology already demonstrates these maximum leak thresholds are feasible, we recommend Ecology adopt a 5% leak threshold of the full system charge for indirect ALDS, rather than 50 lbs of refrigerant or 10% of the full system charge.

### **Response to Comment on CARB R3 Reporting System**

Washington should look to the CARB R3 reporting system for guidance in shaping its web-based reporting, including the facilities or appliances that are required to submit information. We recommend adopting similar requirements to California which mandates reporting for facilities using at least one refrigeration system containing more than 50 pounds of refrigerant with a GWP greater than 150. EIA recommends in addition to the proposed reporting requirements and those required under the CARB R3 system, that registered facilities be required to report on whether they have installed ALDS.<sup>5</sup> This reporting information will allow Ecology to receive data on emissions predictions before and after ALDS.

### **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 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.<sup>6</sup>

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<sup>4</sup> [https://www.epa.gov/system/files/documents/2022-04/gc-webinar-data-driven-leak-reduction-2022-04-12\\_0.pdf](https://www.epa.gov/system/files/documents/2022-04/gc-webinar-data-driven-leak-reduction-2022-04-12_0.pdf)

<sup>5</sup> <https://www2.arb.ca.gov/sites/default/files/barcu/regact/2020/hfc2020/frorevised.pdf>

<sup>6</sup> <https://www.regulations.gov/docket/EPA-HQ-OAR-2021-0643>