



Hydrofluorocarbons (HFCs) Rulemaking Chapter 173-443 WAC



DEPARTMENT OF
ECOLOGY
State of Washington

Welcome to today's meeting

We will start at 9:30 a.m. PDT

Sound checks will occur at 9:20 a.m. and 9:25 a.m.

Hydrofluorocarbons (HFCs) Rulemaking

Chapter 173-443 WAC

Hydrofluorocarbons (HFCs) Rulemaking Team



Eman Jabali – Host

Laura Westfall – Technical Host

Leonard Machut – HFC Unit Supervisor

Joanna Ekrem – Acting Rules & Planning Unit Supervisor

Linda Kildahl, HFC Rulemaking Lead, Rules & Planning Unit

Tamara Dumitrescu – HFC Technical Lead

Kaylene Brink – GHG Reduction Specialist

Janée Zakoren - Community Outreach & Engagement Specialist

AGENDA

- Welcome & today's agenda
- July meeting recap
- Updated draft rule language
- Refrigerant Management Program
- Wrap up, future meetings

July 6 Meeting Recap

- Draft rule language review (GWP thresholds)
- Refrigerant Management Program (RMP) introduction

Updated Draft Rule Language Review

- Definitions - updates
- New air conditioning equipment – correction to effective date

“Industrial Process Refrigeration”

“**Industrial process refrigeration**” means to cool process streams at a specific location in manufacturing and other forms of industrial processes and applications. These complex, customized systems are directly linked to the industrial process. Industrial process refrigeration using a chiller is considered a type of refrigeration application except for purposes of applying a maximum GWP threshold for refrigerants used in new equipment under WAC 173-443-040, Table 4. **Industrial process refrigeration not using a chiller is considered a type of refrigeration application throughout this chapter.** Where one appliance is used for both industrial process refrigeration and other applications, it will be considered an industrial process refrigeration systems if 50 percent or more of its operating capacity is used for industrial process refrigeration.

**Updated sentence

“Non-Essential Consumer Products”

“Nonessential Consumer Products” means the following products if they are propelled by, contain, or manufactured with a chlorofluorocarbon, hydrochlorofluorocarbon, or hydrofluorocarbon. This includes, but is not limited to:

(a) Any plastic streamer or noise horn....

(b) Any cleaning fluid for electronic and photographic equipment **for which there is not a low-GWP propellant approved by EPA for its use.** This includes, but it not limited to:

(i) Liquid packaging;

(ii) Solvent wipes;

(iii) solvent sprays, and

(iv) Gas sprays

(c) Any plastic foam product, except any plastic form product blown with CFC-11....

****Updated sentence**

“Consumer”

“Consumer” means the ultimate purchaser, recipient, or user of a product.

~~For purposes of the refrigerant recharge prohibition under WAC 173-443-040, Table 4, a person who purchases automotive refrigerant in a small container for purposes of servicing or repairing another person’s MVAC system (e.g. MVAC technician) is considered a “consumer.”~~

****Updated definition – from 40 CFR 82.62**

040: Table 3, New Air Conditioning

Air Conditioning End-Uses	Prohibited Substances (Refrigerant GWP)	Effective Date
Room/wall/window air conditioning equipment, PTACs , PTHPs , portable air conditioning equipment, and residential dehumidifiers (new) (New and existing facilities)	750+	January 1, 2024
PTACs , PTHP's and other types of air conditioning equipment (new) used in residential and nonresidential applications (New and existing facilities)	750+	January 1, 2026
Variable refrigerant flow (VRF) or volume system (new) (New and existing facilities)	750+	January 1, 2026

Refrigerant Management Program

The RMP applies to refrigeration and air conditioning systems using 50 pounds of refrigerant or more (in a single circuit).

- Registration
- Leak inspections
- Leak repair
- Reporting
 - Notification
- Recordkeeping
- Exemptions

Registration– Refrigeration and Air Conditioning

Large Equipment Registration:

January 1, 2024 – March 1, 2024

- Registration dates will vary depending on charge size
- Dates of registration may change from what is shown in table

Systems using low-GWP refrigerants (<150) do not need to register in the program

- **Charge sizes**

- Large = 1,500+ lbs
- Medium = 200 to 1,499 lbs
- Small = 50 to 199

Leak Inspections – Refrig. and AC

- **Large**
 - Monthly
 - Anytime 5 or more pounds or 1% total refrigerant charge (which is greater) is added
- **Medium**
 - Quarterly
 - Anytime 5 or more pounds or 1% of total refrigerant charge (whichever is greater) is added
- **Small**
 - Annually
 - Anytime 5 or more pounds or 1% of total refrigerant charge (whichever is greater) is added

Routine leak inspections are not required on equipment having automatic leak detection installed and appropriately maintained

Inspectors must be EPA-certified (40 CFR 82.157(g)(2))

Leak Rate Thresholds and Leak Rate Calculations

Category	Leak rate threshold*
Retail or Commercial Refrigeration	16%
Cold Storage	16%
Industrial Process Refrigeration	24%
Air Conditioning	8%

***Leak rate threshold does not change with equipment size**

How to calculate:

Must use rolling average method described under [40 CFR 82.152](#)

When to calculate:

At each leak inspection

Annually – at end of calendar year

Each time 1% or more of total refrigerant charge is added

Leak Repair & Other Corrective Action

Applies to all size categories of equipment (50+ pounds)

Leaks must:

- Have repair work performed by EPA-certified technician
- Be repaired within 14 days of detection
 - If certain conditions exist, facility owners may request 45 day or 120 day timeframe
 - If verification test fails, facility owners have additional 14, 45, or 120 day timeframe to repair leak(s)
 - If leak(s) cannot be repaired after additional timeframe, a retrofit or retirement plan must be developed*

*Retrofit or retirement plans must be submitted when the leak threshold is exceeded and repairs have not been completed after additional timeframe. Work under the plan must be completed within six months of leak detection

Notification Requirements

Applies to all sizes categories of equipment (50+ pounds) that exceeds equipment-specific leak rate threshold

Notify Ecology:

- Within 5 days of leak threshold exceedance (using rolling 12 month average method)
- Upon completion of:
 - leak repair verification test - within 30 days of leak threshold exceedance
 - follow up verification test, if applicable - within 60 days of leak threshold exceedance
 - work described in retrofit or retirement plan, if applicable – within 30 days of completion

Annual Reporting – Refrigeration & Air Conditioning (200+ pound charge)

Applies to **LARGE** and **MEDIUM** size equipment only

- **Facility information:**
 - NAICS code, contact, address, etc
- **Equipment information:**
 - type, manufacturer, model year, temperature, full charge, etc)
- **Service/repair information:**
 - repairs and verification tests, additional recharge, purpose for recharge, certified technician information
- **Refrigerant use (lbs):**
 - amount purchased, charged into system, recovered, stored, shipped for destruction/reclamation

Annual Reporting – Refrigerant Distributors, Wholesalers, Reclaimers

- Facility information
- Purchases and use (distributors, wholesalers)
 - **Total statewide aggregated weight (lbs):**
 - purchased or received for resale/distribution and aggregated amount sold or distributed for resale (excluding sales outside of WA)
 - shipped to certified reclaimer
- Purchases and use (certified reclaimers)
 - **Total statewide aggregated weight (lbs):**
 - received for reclamation or destruction
 - reclaimed in WA
 - shipped out of WA for reclamation or destroyed or shipped out of WA for destruction

Recordkeeping

Applies to equipment with a full charge of 50+ pounds

The following records must be kept on site for a minimum of five years:

- Registration information
- Documentation of leak detection systems, leak inspections, and ALD annual audit and calibrations
- Records of service and leak repairs and documentation of conditions allowing more than 14 days to correct a leak
- Retrofit or retirement plans – if applicable
- Annual report information
- Any application for exemption and notification of approval or denial or revocation
- Invoices of refrigerant purchases all shipments of refrigerant purchases and shipments

Recordkeeping

Applies to all refrigerant wholesalers, distributors, and reclaimers

The following records must be kept on site for a minimum of five years:

- Registration information
- Invoices of all high-GWP refrigerant received (through sale or transfer) and all high-GWP refrigerant distributed (through sale or transfer)
 - Name, date, quantity and type of high-GWP refrigerant

Exemptions

Not yet defined

**We are working on draft
recommendations**

Additional Questions or Comments?

Wrap up & Looking Ahead

Future Meeting Dates

October 19

Additional dates TBD

Meetings times are:

9:30am to 12:00pm PDT

Ecology Contacts

Compliance/Technical Assistance

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Rulemaking

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General questions:

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Stay informed

- **Compliance assistance, submitting reports:**
 - [Hydrofluorocarbons - Washington State Department of Ecology](#)
 - <https://ecology.wa.gov/Air-Climate/Climate-change/Reducing-greenhouse-gases/Hydrofluorocarbons>
- **Rulemaking:**
 - [WAC 173-443-455 - Washington State Department of Ecology](#)
 - <https://ecology.wa.gov/Regulations-Permits/Laws-rules-rulemaking/Rulemaking/WAC-173-443-455>
- **Informal comments:**
 - [Rulemaking - Informal Comment Period on Hydrofluorocarbons \(HFCs\) Rule and Air Quality Fee Rule \(commentinput.com\)](#)
 - <https://aq.ecology.commentinput.com/?id=6FM8R>

Use QR to learn
more about the
HFC transition in
Washington state.



Thank you