



Hydrofluorocarbons (HFCs) Rulemaking Chapter 173-443 WAC

January 25, 2023

Hydrofluorocarbons (HFCs) Rulemaking Team

- Eman Jabali – Host
- Cooper Garbe – Rules and Planning Unit Supervisor
- Leonard Machut – HFC Unit Supervisor
- Linda Kildahl – HFC Rulemaking Lead
- Tamara Dumitrescu – HFC Technical Lead
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Agenda

- Welcome and today's agenda
- November meeting recap
- RMP draft rule language
- EPA rule comparison
- Wrap up



November 17, 2022 Meeting Recap



Refrigerant Management Program

RMP – Anticipated Registration Dates

System Size	Pounds of High-GWP Refrigerant	Initial Registration Due (based on largest equipment)
Large	1,500+	March 1, 2024
Medium	200–1,499	March 1, 2026
Small	50–199	March 1, 2028

RMP Registration Information

Facility Information

- Name of owner
- Federal tax identification number (EIN)
- Facility NAICS Code
- Name of facility and store identifier (store number)
- Mailing and physical address(es)
- Facility contact name, phone number, and email

Refrigeration or Air Conditioning System Information

- Identification number
- System type
- Equipment manufacturer
- Equipment model and year
- Equipment serial number
- Temperature classification
- Full charge
- Type of refrigerant used

RMP - Program Fees

Size	Registration Dates	Annual Fee	One-Time Implementation Fee
Large	January 1, 2024 – March 1, 2024	\$370	\$150
Medium	January 1, 2026 – March 1, 2026	\$170	N/A
Small	January 1, 2028 – March 1, 2028	N/A	N/A

RMP – Leak Inspection Requirements

System Size Refrigeration and A/C	Schedule	Beginning
Large (1,500+ lbs.)	Monthly	January 1, 2024
Medium (200 – 1,499 lbs.)	Quarterly	January 1, 2024
Small (50 – 199 lbs.)	Annually	January 1, 2024

ALD – Refrigeration ONLY	Schedule	Beginning
Large (1,500+ lbs.) indoor	Continuous	January 1, 2025

Method for inspection includes:

- Calibrated leak detection device;
- Bubble test; or
- Observation of oil residue

Automatic Leak Detection – Refrigeration

Refrigeration systems with a full charge of 1,500 pounds or more:

- Must install ALD by January 1, 2025 (if refrigerant circuit or major components are located inside an enclosed structure)
- Required ALD must meet detection levels

unless

Facility will transition the refrigeration system to a low-GWP refrigerant (<150) before January 1, 2027

- No application for exemption is required
- Documentation must be kept on file

Automatic Leak Detection – Refrigeration (continued)

Required detection levels:

Direct – leak detection system that automatically interprets the presence in air of refrigerant leaked from refrigeration system

- Minimum detection – 10 ppm
- Minimum alarm – 100 ppm

Indirect – leak detection system that automatically interprets measurements (e.g., temperature or pressure) within a refrigeration system that indicate a refrigerant leak in refrigerated cases and other locations in the system

- Minimum detection – 50 pounds of refrigerant lost or 10% of system full charge, whichever is less

RMP – Leak Rate Thresholds

Equipment Type	Leak Rate Threshold
Commercial or retail refrigeration	16%
Industrial process refrigeration	24%
Air conditioning	8%

Required notice to Ecology (through data system):

- Within 30 days of leak threshold exceedance based on 12-month rolling average
- Upon completion of:
 - Initial leak repair verification test – within **45** 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

RMP – Leak Repair Requirements

Starting January 1, 2024 – applies to systems \geq 50 pounds

- 14 days to repair a leak
- 45-day conditional allowance
- 120-day conditional allowance

- Verification test (initial)
- Verification test (follow up – if system is evacuated)
- Unsuccessful repairs triggers retrofit or retirement plan

RMP – Retrofit or Retirement Plan

- Prepare plan after second timeframe for leak repair is passed and leak is not repaired
- Plan must establish a schedule to retrofit or retire a leaking refrigeration or air conditioning system within six months
 - Submit plan to Ecology if applicable leak rate threshold is exceeded and leak repair attempts fail
 - No later than 60 days following expiration of the second repair timeframe

Exemptions

Available for up to 3 years

- Leak repair
- Retrofit or retirement plan

Types of exemptions

- Force majeure
- Economic hardship

Application process

- Documentation
- Decision no later than 60 days following determination of complete application

RMP –

Reporting Requirements and Platform

Annual report required for refrigeration and air conditioning systems having a system(s) with ≥ 200 pound charge

Reports cover previous calendar year, beginning

- March 1, 2025 for systems with 1,500 \pm pounds
- March 1, 2027 for systems with 200 – 1,499 pounds

IT reporting system – reports will tie to registration information

- Modeling after CARB's R3 system; request comments regarding efficacy
- Construction is just starting

RMP – Recordkeeping

- Applies to any system with a full charge ≥ 50 pounds
 - Required starting January 1, 2024
 - Maintain records for 5 years

RMP – Required Service Practices

- Hold current, valid certification under 40 CFR 82.162
- Use only certified recovery equipment under 40 CFR 40 CFR 82.158
- May not intentionally discharge refrigerant to the atmosphere
- Make recovery attempt before opening appliance to atmospheric conditions
- May not add additional charge unless refrigerant is SNAP-approved or class I or class II (Section 602)
- May not add additional charge to leaking appliance
- Evacuate cylinder to vacuum of 15 inches mercury
- Satisfy job site evacuation requirements under 40 CFR 82.156 during recycling, recovering, disposing

Questions about the RMP

EPA Proposed Technology Transitions Rule

- Continue Washington rulemaking with no changes until EPA adoption
- Re-evaluate after EPA adoption
- Reviewing several options
 - Goal is to meet create simplest regulatory framework while meeting the intent of WA HFC legislation
- EPA and WA rules are similar, but not the same
 - WA applies to retrofits
 - WA prohibits small cans

EPA Rulemaking Comparison

Category	WA Draft HFC Rule	EPA Proposed Technology Transitions Rule
GWP Limits – Refrigeration	150 GWP >50 lb. charge (not all sizes)	300 GWP < 200 lb. charge 150 GWP > 200 lb. charge (all sizes)
GWP Limits – Most A/C	750 GWP excluding chillers	700 GWP including chillers
Reporting for manufacturers	None	Required
Labeling	Similar	Similar
Recordkeeping	5 years	3 years
Sell through periods	Does not restrict sale or purchase of equipment manufactured before effective date	Allows 1 year between manufacturing end-date and sale/purchase end-date
Other		GWP limits for other products, include foams, aerosol propellants, and motor vehicles

Next Steps

- Comment period timeframe (informal) closes February 15, 2023
- Regulatory/economic analyses
 - Gather data, provide structure for input March–April 2023
 - Draft document May–June 2023
- Rule proposal July 2023
- Public comment period July–August 2023
- Adopt rule November 2023
- Effective by January 2024

More Questions or Comments

Ecology Contacts

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General questions

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Stay Informed

General Information

- <https://ecology.wa.gov/Air-Climate/Climate-change/Reducing-greenhouse-gases/Hydrofluorocarbons>

Rulemaking

- <https://ecology.wa.gov/Regulations-Permits/Laws-rules-rulemaking/Rulemaking/WAC-173-443-455>

Informal comments

- <https://aq.ecology.commentinput.com/?id=6FM8R>

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



Thank you