American Innovation and Manufacturing (AIM) Act Compliance Guide for Small Businesses

Please refer to official Environmental Protection Agency (EPA) guidance to verify that applicable information in this guide is up to date.

The purpose of this guide is to provide small businesses in Hawai‘i with an overview of the AIM Act and what they need to know to stay in compliance. Specifically, it covers applicability criteria for refrigerant-containing appliances and systems; appliance maintenance, recordkeeping and reporting requirements for those appliances; limits on product availability; and restrictions on system installation.

The contents of this document are sourced from the EPA Final Rule, 40 CFR 84 - Phasedown of Hydrofluorocarbons, specifically Subpart B - Restrictions on the Use of Hydrofluorocarbons (Sections 3 and 4 of this document) and Subpart C - Management of Regulated Substances (Section 2 of this document).

Contents

Appliance Management Templates, Tools, and Forms

Appliance Inventory Record Template

Individual Appliance Records Template, includes:

- General Service and Maintenance Record
- Leak Inspections Records
- Verification Test Records
- Purged Refrigerant Exclusion Record
- Appliance Mothballing Record
- Appliance Retrofit Plan Template
- Appliance Retirement Plan Template

Automatic Leak Detection System Record Template

Change of Leak Rate Calculation Method Record Template

Chronically Leaking Appliance Report Template

Leak Rate Calculator (Annualizing Method & Rolling Average Method)

Request to Cease Retrofit or Retirement Plan Form

Leak Repair Extension Request Form

Retrofit & Retirement Plan Extension Request Form

1. Overview

1.1 **What** is the AIM Act?

The American Innovation and Manufacturing (AIM) Act is a federal law that directs the U.S. Environmental Protection Agency (EPA) to phase down the production and consumption of hydrofluorocarbons (HFCs) by 85% by the year 2036. HFCs are commonly used as refrigerants in commercial refrigerators, freezers, ice machines, air-conditioning systems, heat pumps, and other HVAC equipment. In addition to phasing down these refrigerants, the AIM Act also sets requirements for transitioning to lower global warming potential (GWP) refrigerants and additional requirements that apply to owners and operators for managing the use and reuse of refrigerants in their appliances.

1.2 **Why** Does the AIM Act Exist?

HFCs are powerful greenhouse gases with high GWPs. Although they replace ozone-depleting substances (ODS) such as chlorofluorocarbons (CFCs) and hydrochlorofluorocarbons (HCFCs) because they don't harm the ozone layer, they contribute significantly to climate change when they leak into the atmosphere or are vented during equipment servicing or disposal. The AIM Act works to reduce these emissions by encouraging a transition to newer, more climate-friendly alternatives (e.g., hydrofluoroolefins (HFOs), ammonia, carbon dioxide, and hydrocarbons) as well as establishing standards for proper management of refrigerant-containing appliances. A global HFC phasedown is expected to avoid up to 0.5 degrees Celsius of global warming by 2100.

1.3 **Who** Does the AIM Act Affect?

The AIM Act affects a wide range of businesses that use refrigeration and HVAC equipment, including those in the food industry. Specifically, the act applies to:

- Owners and operators of equipment that contains HFCs or other high-GWP refrigerants;
- Businesses that wish to purchase and/or install HFC-containing equipment;
- Refrigerant technicians and contractors who service, retrofit, or dispose of HFC-containing equipment and/or reclaim HFC refrigerants; and

- Businesses that sell, import, or distribute HFC refrigerants or HFC-containing products.

See Section 1.4, What Products Are Affected by the AIM Act?, for more information.

1.4 **What Products** Are Impacted by the AIM Act?

1.4.1 **Refrigerants** Impacted by the AIM Act

The AIM Act targets 18 HFCs, referred to as "regulated substances", and all refrigerant blends that contain one or more of them (see Table 1, Regulated Refrigerants). These refrigerants will become increasingly more expensive and less available over time. In addition, appliances and systems containing these refrigerants are subject to certain regulations. See Section 1.4.2, Refrigerant-Containing Equipment Impacted by the AIM Act, and Section 2, Appliance Management, for details.

Table 1 – Regulated Refrigerants

In case of future updates to EPA's list of regulated refrigerants, refer to Regulatory Actions for Managing HFC Use and Reuse for the most up-to-date HFC use and reuse information.

Regulated Substances	Common Refrigerant Blends Containing Regulated Substances (including but not limited to)
R-134	
R-134a	R-404A, R-407A/B/C/F, R-417A/C, R-420A, R-421A/B, R-422A/B/C/D, R-424A, R-426A, R-434A, R-437A, R-438A, R-442A, R-125/290/134a/600a, RB-276, RS-24, RS-44, Freeze 12, R-448A, R-449A/B
R-143	
R-245fa	
R-365mfc	
R-227ea	R-442A, GHG-X5
R-236cb	
R-236ea	
R-236fa	
R-245ca	
R-43-10-mee	
R-32	R-407A/B/C/F, R-410A/B, R-438A, R-442A, R-452A, R-448A, R-449A/B
R-125	R-404A, R-402A/B, R-407A/B/C/F, R-408A, R-410A/B, R-417A/C, R-421A/B, R-422A/B/C/D, R-424A, R-426A, R-428A, R-434A,

	R-437A, R-438A, R-442A, R-507A, R-125/290/134a/600a, RS-24, RS-44, R-452A, R-448A, R-449A/B
R-143a	R-404A, R-408A, R-428A, R-434A, R-507A
R-41	
R-152	
R-152a	R-411A/B, R-442A, G2018C
R-23	

1.4.2 **Refrigerant-Containing Equipment** Impacted by the AIM Act

Appliance Management

The following appliances are subject to recordkeeping, reporting, maintenance (i.e., leak checks), servicing (i.e., leak repairs), and retrofit and retirement plan requirements, under the AIM Act (see Section 2, Appliance Management, for more information):

Any refrigerant-containing appliance with a full charge* of 15 or more pounds of refrigerant, where the refrigerant contains:

- **a regulated substance, a refrigerant blend containing a regulated substance, or a refrigerant substitute with a GWP greater than 53** (see Table 1, List of Regulated Refrigerants)

NOT INCLUDING appliances that:

- **contain only an ozone-depleting substance (ODS) as a refrigerant**
- **are used for residential and light commercial air conditioning and heat pumps**

*See Section 2.2.6, Methods for Determining Full Charge.

Product Availability and System Installation

In addition to the above, the AIM Act restricts the manufacture, import, export, sale, distribution, and purchase of certain HFC-containing products and the installation of certain HFC-containing systems. These regulations are explained in detail in Section 3, Product Availability, and Section 4, System Installation, respectively.

1.5 **How** Does the AIM Act Affect My Business?

Most small businesses are impacted by the AIM Act in three main ways:

1. **Appliance Management Requirements:** Certain refrigerant-containing appliances are subject to leak checks, servicing, leak repair and retrofit best practices, appliance retirement plans, and recordkeeping/reporting requirements. See

Section 1.4, What Products Are Impacted by the AIM Act?, and Section 2, Appliance Management, for more information.

2. **Product Availability and System Installation Restrictions**: Many HFC-containing products will not be available on the market after certain dates, and HFC refrigerants will become less available and more expensive. In addition, the installation of certain new or used HFC-containing systems is banned after certain dates. However, certain components of HFC-containing equipment will remain available on the market indefinitely, and non-commercial transactions (i.e., gifts and trades) of used HFC-containing products are still allowed. See Section 3, Product Availability, and Section 4, System Installation, for more information.
3. **Long-Term Planning:** Understanding AIM Act requirements, timelines, and changes to product availability can help you avoid unexpected compliance issues, costs, or equipment downtime. Switching to compliant refrigerants and equipment will likely reduce operating costs over time through efficiency improvements but will require upfront planning.

1.6 **When** Do AIM Act Requirements Begin?

Regulations affecting small businesses take effect between January 1, 2025 and January 1, 2031. Because certain timelines for product availability and system installation restrictions vary by equipment category, you should review which subsector your equipment falls into and check the applicable deadlines in Section 3, Product Availability, and Section 4, System Installation.

The following start dates for AIM Act regulations are as follows:

Regulation	Start Date
Recordkeeping and Reporting Requirements*	January 1, 2026
Appliance Maintenance, Servicing, Repair, Retrofit, and Retirement Requirements*	January 1, 2026
Restrictions on Equipment Purchase, Sale, and Installation**	January 1, 2025-January 1, 2031 (depending on subsector**)

*See Section 2, Appliance Management, for more information.

**See Section 3, Product Availability, and Section 4, System Installation, for more information.

1.7 What Should I Be Doing Now?

1. **Inventory your AIM Act-regulated appliances,** including refrigerant type, charge size, and installation date. See Section 2, Appliance Management, and Section 2.1.1, Appliance Inventory Records, for more information.
2. **Organize required records** of appliance inventory and service/maintenance history for AIM Act-regulated appliances. See Section 2.1, What Records Do I Need to Keep? for more information.
3. **Understand service and maintenance requirements** for your AIM Act-regulated appliances. See Section 2, Appliance Management, and Section 2.2, Service and Maintenance Requirements for more information.
4. **Use EPA-certified technicians.** Ensure your equipment servicer is EPA 608-certified and can provide documentation of all service and maintenance activities. See Section 2.2, Service and Maintenance Requirements, for more information.
5. **Know what reports EPA requires**, which may or may not apply to you. See Section 2.3, Reporting Requirements, for more information.
6. **Plan for equipment replacement** by developing appliance retrofit/retirement plans, budgeting for future upgrades, talking with vendors, and knowing key dates for equipment purchasing and installation bans. See Section 3, Product Availability, and Section 4, System Installation, for more information.

2. Appliance Management

As of January 1, 2026, appliance management practices, including recordkeeping, reporting, maintenance (i.e., leak checks), servicing (i.e., leak repairs), and retrofit and retirement plans are required for the following appliances:

Any refrigerant-containing appliance with a full charge* of 15 or more pounds of refrigerant, where the refrigerant contains:

- **a regulated substance, a refrigerant blend containing a regulated substance, or a refrigerant substitute with a GWP greater than 53** (see Table 1, List of Regulated Refrigerants)

NOT INCLUDING appliances that:

- **contain only an ozone-depleting substance (ODS) as a refrigerant**
- **are used for residential and light commercial air conditioning and heat pumps**

*See Section 2.6, Methods for Determining Full Charge.

2.1 What Records Do I Need to Keep?

Starting January 1, 2026, appliance inventory records (see Section 2.1.1, Appliance Inventory Records) must be kept from the date of installation until at least three years after the appliance is retired. In addition, the records explained in Section 2.1.2, Service and Maintenance Recordkeeping Requirements, and Section 2.1.3, Other Recordkeeping Requirements, must be kept and maintained for at least three years following the date of activity (i.e., service, maintenance, etc.):

2.1.1 Appliance Inventory Records

1. Keep an inventory record of each appliance in electronic or paper format (from the date of installation until at least three years after the appliance is retired), including:
    a. The owner/operator of the appliance
    b. Address where the appliance is located
    c. Full charge of the appliance and method for how the full charge was determined (see Section 2.6, Methods for Determining Full Charge, for details)
        i. If using method 4 (using an established range) for determining full charge, records must include the range for the full charge of the appliance, its midpoint, and how the range was determined

d. Any revisions of the full charge, how they were determined, and the dates such revisions occurred
e. Date of installation

Appliance Inventory Record Template

2.1.2 Service and Maintenance Recordkeeping Requirements

1. Maintain records (with help from EPA 608-certified technician) of all installations, services, repairs, or disposals (including any addition or removal of refrigerant) for appliances, including:
    a. Identity and location of the appliance
    b. Date of the installation, service, repair, or disposal performed
    c. Part(s) of the appliance being installed, serviced, repaired, or disposed
    d. Type of installation, service, repair, or disposal performed for each part
    e. Name of the person performing the installation, service, repair, or disposal
    f. Amount and type of refrigerant added or removed from the appliance
    g. Full charge of the appliance. See Section 2.6, Methods for Determining Full Charge, for details.
    h. Leak rate and the method used (does not apply if you are disposing the appliance, following a retrofit, installing a new appliance, or if the refrigerant addition qualifies as a seasonal variance). See Section 2.2.1, Calculating Leak Rates, and Section 2.7, Seasonal Variance, for details.

Individual Appliance Records Template

2. Maintain records (by request from EPA 608-certified technician) of leak inspections* that include:
    a. Date of inspection
    b. Method(s) used to conduct leak inspection
    c. List of the location of each leak that was identified
    d. Certification that all visible and accessible parts of the appliance were inspected.

*See Section 2.2.3, Leak Inspections, for details.

Individual Appliance Records Template

3. Maintain records (by request from EPA 608-certified technician) of the dates and results of all initial and follow-up verification tests* following leak repairs, including:
    a. Location of the appliance
    b. Date(s) of the verification test(s)
    c. Location(s) of all repaired leaks that were tested
    d. Type(s) of verification test(s) used
    e. Results of those tests

*See Section 2.2.2, Leak Repair and Verification Tests, for details.

Individual Appliance Records Template

2.1.3 Other Recordkeeping Requirements (if applicable)

1. Keep copies of reports submitted to EPA and any responses from EPA. See Section 2.3, Reporting Requirements, for details.

2. If using an automatic leak detection system (ALDS),* maintain records, including:
    a. Details regarding installation of the system
    b. Details regarding annual audit and calibration of the system
    c. Each date the monitoring system identified a leak
    d. The location of the leak

*See Section 2.4, Automatic Leak Detection Systems, for details.

Automatic Leak Detection System Record Template

3. If switching leak rate calculation method* after a change in ownership or acquisition of a facility, maintain records, including:
    a. Basic identification information (i.e., owner/operator name, facility name, facility address where appliance is located, and appliance ID or description)
    b. The date the operating facility was purchased or otherwise acquired
    c. The leak rates for all appliances at any facility for which the leak rate calculation method would change, listing the results for each leak rate calculation method separately

d. The date the new leak rate calculation method is adopted
e. The leak rate calculation method you are using after the change.

*See Section 2.2.1, Calculating Leak Rates, for details.

Change of Leak Rate Calculation Method Record Template

4. If retrofitting or retiring an appliance, maintain retrofit or retirement plans*, including:
    a. Identification and location of the appliance
    b. Type and full charge** of the refrigerant used in the appliance
    c. Type and full charge** of the refrigerant to which the appliance will be converted, if retrofitted
    d. Itemized procedure for converting the appliance to a different refrigerant, including changes required for compatibility with the new refrigerant, if retrofitted
    e. Plan for the disposition of recovered refrigerant
    f. Plan for the disposition of the appliance, if retired
    g. A schedule, not to exceed one year, for completion of the appliance retrofit or retirement

*See Section 2.2.4, Retrofit and Retirement Plans, for details.

**See Section 2.6, Methods for Determining Full Charge, for details.

Individual Appliance Records Template

5. If requesting a retrofit and/or retirement extension from EPA, keep a copy of the extension request submitted to the EPA. See Section 2.2.4, Retrofit and Retirement Plans, for details.

Retrofit & Retirement Plan Extension Request Form

6. If choosing to suspend a deadline by mothballing an appliance, maintain records documenting when the appliance was mothballed and when additional refrigerant was added to the appliance (or isolated component). See Section 2.5, System Mothballing, for details.

Individual Appliance Records Template

7. If excluding purged refrigerants that are destroyed from annual leak rate calculations* (at a verifiable destruction efficiency of 98 percent or greater), maintain records to support the amount of refrigerant claimed as sent for destruction, including:
    a. Flow rate
    b. Quantity or concentration of the refrigerant in the vent stream
    c. Periods of purge flow
    d. Identification of the facility and contact person, including address and phone number
    e. Description of the appliance, focusing on aspects relevant to the purging or refrigerant and subsequent destruction
    f. Description of the methods used to determine the quantity of refrigerant sent for destruction and type of records that are being kept by owner/operators where appliance is located
    g. Frequency of monitoring and data-recording
    h. Description of the control device, and its destruction efficiency

*See Section 2.3.2, Excluding Purged Refrigerants That Are Destroyed from Annual Leak Rate Calculations, for more information.

Individual Appliance Records Template

8. If excluding additions of refrigerant due to seasonal variance from leak rate calculation*, maintain records stating that you are using the seasonal variance flexibility and documenting the amount of refrigerant added and removed in your general records.

*See Section 2.2.1, Calculating Leak Rates, and Section 2.7, Seasonal Variance, for more information.

Individual Appliance Records Template

2.2 Service and Maintenance Requirements

As of January 1, 2026, the following service and maintenance requirements, including leak checks, leak repairs, and appliance retrofit and retirement plans, apply to the appliances identified at the beginning of Section 2, Appliance Management.

2.2.1 Calculating Leak Rates

1. Every time refrigerant is added to an appliance, the leak rate must be calculated (unless the addition is made immediately following a retrofit, installation of a new refrigerant-containing appliance, or qualifies as a seasonal variance (see section 2.7, Seasonal Variance, for details)).

Leak Rate Calculator

❖ Leak Rate Calculations

➢ Leaks can be calculated in two ways—the annualizing method and the rolling average method. Once a leak calculation method has been chosen, you may not switch to a different method. The only cause for switching methods is if you purchase or acquire an operating facility with appliances that previously used a different method, and you want to switch them over to the method you use at your other facilities. See 40 CFR 84.106(b)(3) and Section 2.1.3, Other Recordkeeping Requirements, for details.

- Annualizing Method (see Figure 1)
  If using the annualizing method for the first time after January 1, 2026, the calculation should substitute 365 days as the number of days since last refrigerant addition.

$$\text{Leak rate (\% per year)} = \frac{\textit{pounds of refrigerant added}}{\textit{pounds of refrigerant in full charge}} \times \frac{365\ \textit{days/year}}{\textit{shorter of: \# days since refrigerant last added or 365 days}} \times 100\%$$

Figure 1 – Annualizing Method for Calculating Leak Rate

Leak Rate Calculator – Annualizing Method

- Rolling Average Method (see Figure 2)
  If using the rolling average method for the first time after January 1, 2026, the calculation should substitute pounds of refrigerant added since January 1, 2026.

$$\text{Leak rate (\% per year)} = \frac{\begin{array}{c}\textit{pounds of refrigerant added over past 365 days} \\ \textit{(or since the last successful follow-up verification test showing all identified} \\ \textit{leaks in the appliance were repaired, if that period is less than one year)}\end{array}}{\textit{pounds of refrigerant in full charge}} \times 100\%$$

Figure 2 – Rolling Average Method for Calculating Leak Rate

Leak Rate Calculator – Rolling Average Method

2. If your appliance has a leak rate above the acceptable leak rate (see Table 2, Acceptable Leak Rates), you must act to 1) repair, 2) create a retrofit plan, or 3) create a retirement plan for the appliance within 30 days (or 120 days for leak repair if an industrial process shutdown is required) of when the leak rate was calculated. See Section 2.2.2, Leak Repair and Verification Tests, Section 2.2.3 Leak Inspections, and Section 2.2.4 Retrofit and Retirement Plans, for details.

Table 2 – Acceptable Leak Rates

Type of Appliance	Acceptable Leak Rate (%)
Commercial refrigeration appliances*	20% or less
Industrial process refrigeration appliances*	30% or less
Comfort cooling appliances, refrigerated transport appliances, or other appliances* with full charge** of 15 or more pounds	10% or less

* See Definitions section for details.

** See Section 2.6, Methods for Determining Full Charge.

2.2.2 Leak Repair and Verification Tests

If choosing to do a leak repair following a failed leak check:

1. Keep records according to Section 2.1.2, Service and Maintenance Recordkeeping Requirements.

2. An EPA 608-certified technician must conduct a leak inspection to identify the location of leaks. See Section 2.2.3, Leak Inspections, for details.

3. Following the repair, two verification tests must be conducted on each leak that was repaired. Each verification test must demonstrate that the repair adjustments or alterations to the appliance have held.
    a. Initial Verification Test: within 30 days (or 120 days if an industrial process shutdown is required) of when the leak rate was calculated. See 40 CFR 84.106(e)(1) for details.
    b. Follow-Up Verification Test: within 10 days of the successful initial verification test or 10 days of the appliance reaching normal operating characteristics and conditions. See 40 CFR 84.106(e)(2) for details.

4. A leak repair is presumed to be successful if, over the 12-month period after the date of a successful follow-up verification test, there is no further refrigerant addition or if an automatic leak detection system (ALDS) does not find any leaks in the appliance.

5. If verification tests indicate that the repairs have not been successful, you may conduct as many additional repairs and verification tests as needed within the applicable time period. If the appliance does not pass before the end of that time period, it must be retrofitted or retired. See Section 2.2.4, Retrofit and Retirement Plans, for details.

6. Only under certain circumstances may owners/operators request an extension to appliance repair deadlines from EPA. See 40 CFR 84.106(f) for details.

2.2.3 Leak Inspections

Following successful leak repair and verification tests, owners/operators must demonstrate that the appliance's leak rate is acceptable through leak inspections, according to *Table 3, Post-Repair Leak Inspection Requirements*. See Section 2.2.1, Calculating Leak Rates, and Section 2.2.2, Leak Repair and Verification Tests, for details.

Table 3 – Post-Repair Leak Inspection Requirements

Type of Appliance	Post-Repair Leak Inspection Requirement
Commercial refrigeration and industrial process refrigeration appliances* with a full charge** of 500 or more pounds	Once every three months after date of successful follow-up verification***, until leak rate is acceptable for four quarters in a row
Commercial refrigeration and industrial process refrigeration appliances* with a full charge** of 15 or more pounds but less than 500 pounds	Once per year after date of successful follow-up verification***, until leak rate is acceptable for a whole year
Comfort cooling appliances* and other appliances not covered above	Once per year after date of successful follow-up verification***, until leak rate is acceptable for a whole year

*See Definitions section for details.

**See Section 2.6, Methods for Determining Full Charge.

***See Section 2.2.2, Leak Repair and Verification Tests, for details.

When leak inspections are conducted:

1. Keep records according to Section 2.1.2, Service and Maintenance Recordkeeping Requirements.

2. Use an EPA 608-certified technician.

3. Ensure an inspection of all visible and accessible components of the appliance is included. See 40 CFR 84.106(g)(3) for details.

Note: Quarterly or annual leak inspections are NOT required on appliances or portions of appliances continuously monitored by an automatic leak detection system (ALDS) that is audited and calibrated annually.

2.2.4 Retrofit and Retirement Plans

See Definitions section for definitions of retrofit and retire.

If owners/operators fail to take action to identify or repair leaks or a repaired appliance continues to leak above the acceptable leak rate*, the owner must retrofit or retire the appliance:

1. Create a retrofit or retirement plan within 30 days of the exceeding leak rate being calculated. The plan must be executed within one year from when it was finalized.
    a. Retrofit plans must contain the following:
        i. Identification and location of the appliance
        ii. Type and full charge** of the refrigerant used in the appliance
        iii. Type and full charge of the refrigerant to which the appliance will be converted
        iv. Itemized procedure for converting the appliance to a different refrigerant, including changes required for compatibility with the new refrigerant
        v. Plan for disposition of recovered refrigerant
        vi. A schedule, not to exceed one year, for the completion of the appliance retrofit
    b. Retirement plans must contain the following:
        i. Identification and location of the appliance
        ii. Type and full charge** of the refrigerant used in the appliance
        iii. Plan for disposition of recovered refrigerant
        iv. Plan for disposition of the appliance
        v. A schedule, not to exceed one year, for the completion of the appliance retirement

*See Section 2.2.1, Calculating Leak Rates, 2.2.2, Leak Repair and Verification Tests, 2.2.3, Leak Inspections.

**See Section 2.6, Methods for Determining Full Charge.

2. Retrofit or retirement plan must be signed by an authorized company official, dated, accessible at the site of the appliance in paper copy or electronic format, and available for EPA inspection upon request.

3. All work in accordance with the plan must be finished within one year of the plan's date.

4. Only under certain circumstances may owners/operators request relief from or extension of a retrofit or retirement plan. See 40 CFR 84.106(h)(5)(ii) and 40 CFR 84.106(i), Section 2.1.3, Other Recordkeeping Requirements, and Section 2.3, Reporting Requirements, for details.

Individual Appliance Records Template

2.3 Reporting Requirements

Starting January 1, 2026, the following reporting requirements apply. Reports must be submitted electronically to EPA via email at 608reports@epa.gov.

1. All notifications for the following must be submitted electronically to EPA:
    a. Request for extension of time to complete repairs. See 40 CFR 84.106(f), and Section 2.2, Service and Maintenance Requirements, for details and requirements.
    b. Request for relief from the obligation to retrofit or retire an appliance. See 40 CFR 84.106(h)(5)(ii), and Section 2.2.4, Retrofit and Retirement Plans, for details and requirements.
    c. Request for extension of time to complete the retrofit or retirement of an appliance. See 40 CFR 84.106(i), and Section 2.2.4, Retrofit and Retirement Plans, for details and requirements.

Leak Repair Extension Request Form

Request to Cease Retrofit or Retirement Plan Form

Retrofit & Retirement Plan Extension Request Form

2.3.1 Chronically Leaking Appliance Reporting Requirements

1. If you own or operate an appliance containing 15 or more pounds of refrigerant that leaks* 125 percent or more of the full charge** in a calendar year, you must submit a report to EPA electronically (via 608reports@epa.gov) containing the following information by March 1 of the subsequent year:
    a. Basic identification information (i.e., owner or operator name, facility name, facility address where appliance is located, and appliance ID or description)
    b. Appliance type (comfort cooling or other, industrial process refrigeration, or commercial refrigeration)
    c. Refrigerant type
    d. Full charge of appliance (in pounds)

e. Annual percent refrigerant loss
f. Dates of refrigerant addition
g. Amounts of refrigerant added
h. Date of last successful follow-up verification test (see Section 2.2.2, Leak Repair and Verification Tests, for details)
i. Explanation of cause of refrigerant losses
j. Description of repair actions taken
k. Whether a retrofit or retirement plan has been developed for the appliance and if so, the anticipated date of retrofit or retirement (see Section 2.2.4, Retrofit and Retirement Plans, for details)
l. A signed statement from an authorized company official

*See Section 2.2.1, Calculating Leak Rates, for details.

**See Section 2.6, Methods for Determining Full Charge.

Chronically Leaking Appliance Report Template

2.3.2 Excluding Purged Refrigerants That Are Destroyed from Annual Leak Rate Calculations

1. If you are excluding purged refrigerants that are destroyed (at a verifiable destruction efficiency of 98 percent or greater) from annual leak rate calculations refrigerants, you must notify EPA electronically (via 608reports@epa.gov) within 60 days after the first time the exclusion is used by the facility where the appliance is located. The report must include:
    a. Flow rate
    b. Quantity or concentration of the refrigerant in the vent stream
    c. Periods of purge flow
    d. Identification of the facility and contact person, including address and phone number
    e. Description of the appliance, focusing on aspects relevant to the purging of refrigerant and subsequent destruction
    f. Description of the methods used to determine the quantity of refrigerant sent for destruction and type of records that are being kept by owner/operators where appliance is located
    g. Frequency of monitoring and data-recording
    h. Description of the control device, and its destruction efficiency
    i. Signature of an authorized company official.

Sign and email "Purged Refrigerant Exclusion" sheet in Individual Appliance Records Template to EPA

2.4 Automatic Leak Detection Systems

If you own an appliance used for industrial process refrigeration or commercial refrigeration* with a full charge** of 1,500 pounds or more of a refrigerant containing a regulated substance or a substitute for a regulated substance with a GWP greater than 53, you must install an automatic leak detection system (ALDS). Requirements include:

1. If you install an applicable appliance on or after January 1, 2026, you must install and use an automatic leak detection system upon installation or within 30 days of installation.

2. If you install(ed) an applicable appliance on or after January 1, 2017, and before January 1, 2026, you must install and use an automatic leak detection system by January 1, 2027.

*See Definitions section for details.

**See Section 2.6, Methods for Determining Full Charge.

See 40 CFR 84.108 for more information.

2.4.1 Automatic Leak Detection System Recordkeeping Requirements

1. If using an automatic leak detection system (ALDS), you must maintain the following records for at least three years in electronic or paper format:
    a. Details regarding installation of the system
    b. Details regarding annual audit and calibration of the system
    c. Each date the monitoring system identified a leak
    d. The location of the leak

Automatic Leak Detection System Record Template

2.5 System Mothballing

For appliances subject appliance maintenance requirements outlined in Section 2, Appliance Management, timelines for appliance repair, verification tests, and retrofit/ retirement plans may be suspended if the appliance has been mothballed. **Mothballing** means to evacuate refrigerant (using an EPA 608-cerfified technician) from an appliance, or

the affected isolated section or component of an appliance, to at least atmospheric pressure, and to temporarily shut down that appliance. However, timelines pick up again as soon as the system is brough back on-line. If mothballing an appliance, you must maintain records documenting when the appliance was mothballed and when additional refrigerant was added to the appliance (or isolated component). See 40 CFR 84.106(d)(3), (f), (i), and (l)(10) for details.

Individual Appliance Records Template

2.6 Methods for Determining Full Charge

Full charge as it relates to a refrigerant-containing appliance, means the amount of refrigerant required for normal operating characteristics and conditions of the appliance as determined by using one or a combination of the following four methods:

1. Use of equipment manufacturer's determination of the full charge
2. Use of appropriate calculations based on component sizes, density of refrigerant, volume of piping, and other relevant considerations
3. Use of actual measurements of the amount of refrigerant added to or evacuated from the appliance, including for seasonal variances
4. Use of an established range based on the best available data regarding the normal operating characteristics and conditions for the appliance, where the midpoint of the range will serve as the full charge.

2.7 Seasonal Variance

As it relates to a refrigerant-containing appliance, a **seasonal variance** means the removal of refrigerant from an appliance due to a change in ambient conditions caused by a change in season, followed by the subsequent addition of an amount that is less than or equal to the amount of refrigerant removed in the prior change in season, where both the removal and addition of refrigerant occurs within one consecutive 12-month period.

If excluding additions of refrigerant due to seasonal variance from leak rate calculation, maintain records stating that you are using the seasonal variance flexibility and documenting the amount of refrigerant added and removed in your general records.

Individual Appliance Records Template

3. Product Availability

The AIM Act prohibits the manufacture, import, sale, distribution, purchase, and export of certain HFC-containing products in certain subsectors after certain dates, as identified in this section. This means that many HFC-containing appliances will no longer be available on the market after certain dates. However, certain components of HFC-containing equipment will remain available on the market indefinitely, and non-commercial transactions (i.e., gifts and trades) of used HFC-containing appliances are still allowed.

Note that equipment in existence in the United States prior to December 27, 2020, is exempt from the requirements in this section. See 40 CFR 84.56 for details and other exemptions.

Also note that no person may manufacture, import, sell, distribute, purchase or receive for sale or distribution, or attempt to purchase or receive for sale of distribution, or export any product or specified component that is not labeled according to 40 CFR 84.58.

See Definitions section for details on product categories.

3.1 Self-contained residential and light commercial air conditioning and heat pump products

Applicability Criteria: Uses a regulated substance, or a blend containing a regulated substance, with a GWP of 700 or greater

Compliance Dates	Rules
January 1, 2025	No person may manufacture or import
January 1, 2028	No person may sell, distribute, offer for sale or distribution, make available for sale or distribution, purchase or receive for sale or distribution, or attempt to purchase or receive for sale or distribution, or export

3.2 Residential dehumidifiers

Applicability Criteria: Uses a regulated substance, or a blend containing a regulated substance, with a GWP of 700 or greater

Compliance Dates	Rules
January 1, 2025	No person may manufacture or import
January 1, 2028	No person may sell, distribute, offer for sale or distribution, make available for sale or distribution, purchase or receive for sale or distribution, or attempt to purchase or receive for sale or distribution, or export

3.3 Household refrigerators and freezers

Applicability Criteria: Uses a regulated substance, or a blend containing a regulated substance, with a GWP of 150 or greater

Compliance Dates	Rules
January 1, 2025	No person may manufacture or import
January 1, 2028	No person may sell, distribute, offer for sale or distribution, make available for sale or distribution, purchase or receive for sale or distribution, or attempt to purchase or receive for sale or distribution, or export

3.4 Retail food refrigeration—stand-alone units

Applicability Criteria: Uses a regulated substance, or a blend containing a regulated substance, with a GWP of 150 or greater

Compliance Dates	Rules
January 1, 2025	No person may manufacture or import
January 1, 2028	No person may sell, distribute, offer for sale or distribution, make available for sale or distribution, purchase or receive for sale or distribution, or attempt to purchase or receive for sale or distribution, or export

3.5 Vending machines

Applicability Criteria: Uses a regulated substance, or a blend containing a regulated substance, with a GWP of 150 or greater

Compliance Dates	Rules
January 1, 2025	No person may manufacture or import
January 1, 2028	No person may sell, distribute, offer for sale or distribution, make available for sale or distribution, purchase or receive for sale or distribution, or attempt to purchase or receive for sale or distribution, or export

3.6 Refrigerated transport—intermodal containers with the temperature of the refrigerant entering the evaporator (for direct heat exchange systems) or the temperature of the fluid exiting (for chillers) of -50 °C (-58 °F) or higher

Applicability Criteria: Uses a regulated substance, or a blend containing a regulated substance, with a GWP of 700 or greater

Compliance Dates	Rules
January 1, 2025	No person may manufacture or import
January 1, 2028	No person may sell, distribute, offer for sale or distribution, make available for sale or distribution, purchase or receive for sale or distribution, or attempt to purchase or receive for sale or distribution, or export

3.7 Self-contained products in refrigerated transport—road and refrigerated transport—marine subsectors

Applicability Criteria: Uses any of the following: R-402A, R-402B, R-404A, R-407B, R-408A, R-410B, R-417A, R-421A, R-421B, R-422A, R-422B, R-422C, R-422D, R-424A, R-428A, R-434A, R-438A, R-507A, R-125/290/134a/600a (55/1/42.5/1.5), RS-44 (2003 formulation) or GHG-X5 (40 CFR 84.54(a)(7))

Compliance Dates	Rules
January 1, 2025	No person may manufacture or import
January 1, 2028	No person may sell, distribute, offer for sale or distribution, make available for sale or distribution, purchase or receive for sale or distribution, or attempt to purchase or receive for sale or distribution, or export

3.8 Self-contained automatic commercial ice machines

See 10 CFR 431.134 for harvest rate determination methods.

3.8.1 Batch type ice maker products—with a harvest rate less than or equal to 1,000 pounds of ice per 24 hours

Applicability Criteria: Uses a regulated substance, or a blend containing a regulated substance, with a GWP of 150 or greater

Compliance Dates	Rules
January 1, 2026	No person may manufacture or import
January 1, 2029	No person may sell, distribute, offer for sale or distribution, make available for sale or distribution, purchase or receive for sale or distribution, or attempt to purchase or receive for sale or distribution, or export

3.8.2 Batch type ice maker products—with a harvest rate greater than 1,000 pounds of ice per 24 hours

Applicability Criteria: Uses any of the following: R-402A, R-402B, R-404A, R-407A, R-407B, R-407C, R-407F, R-408A, R-410A, R-410B, R-411A, R-411B, R-417A, R-417C, R-420A, R-421A, R-421B, R-422A, R-422B, R-422C, R-422D, R-424A, R-426A, R-428A, R-434A, R-437A, R-438A, R-442A, R-507A, HFC-134a, R-125/290/134a/600a (55/1/42.5/1.5), RB-276, RS-24 (2002 formulation), RS-44 (2003 formulation), GHG-X5, G2018C, or Freeze 12 (40 CFR 84.54(a)(8)(ii))

Compliance Dates	Rules
January 1, 2027	No person may manufacture or import
January 1, 2030	No person may sell, distribute, offer for sale or distribution, make available for sale or distribution, purchase or receive for sale or distribution, or attempt to purchase or receive for sale or distribution, or export

3.8.3 Continuous type ice maker products—with a harvest rate less than or equal to 1,200 pounds of ice per 24 hours

Applicability Criteria: Uses a regulated substance, or a blend containing a regulated substance, with a GWP of 150 or greater

Compliance Dates	Rules
January 1, 2026	No person may manufacture or import
January 1, 2029	No person may sell, distribute, offer for sale or distribution, make available for sale or distribution, purchase or receive for sale or distribution, or attempt to purchase or receive for sale or distribution, or export

3.8.4 Continuous type ice maker products—with a harvest rate greater than 1,200 pounds of ice per 24 hours

Applicability Criteria: Uses any of the following: R-402A, R-402B, R-404A, R-407A, R-407B, R-407C, R-407F, R-408A, R-410A, R-410B, R-411A, R-411B, R-417A, R-417C, R-420A, R-421A, R-421B, R-422A, R-422B, R-422C, R-422D, R-424A, R-426A, R-428A, R-434A, R-437A, R-438A, R-442A, R-507A, HFC-134a, R-125/290/134a/600a (55/1/42.5/1.5), RB-276, RS-24 (2002 formulation), RS-44 (2003 formulation), GHG-X5, G2018C, or Freeze 12 (40 CFR 84.54(a)(8)(ii))

Compliance Dates	Rules
January 1, 2027	No person may manufacture or import
January 1, 2030	No person may sell, distribute, offer for sale or distribution, make available for sale or distribution, purchase or receive for sale or distribution, or attempt to purchase or receive for sale or distribution, or export

3.9 Self-contained refrigerated food processing and dispensing products

Check your manufacturer's manual to determine if your product is within the scope of UL 621.

3.9.1 Such products outside the scope of UL 621 "Ice Cream Makers," Edition 7, dated May 07, 2010, with revisions through September 16, 2020, as of December 26, 2023—with refrigerant charge sizes less than or equal to 500 g

Applicability Criteria: Uses a regulated substance, or a blend containing a regulated substance, with a GWP of 150 or greater

Compliance Dates	Rules
January 1, 2027	No person may manufacture or import
January 1, 2030	No person may sell, distribute, offer for sale or distribution, make available for sale or distribution, purchase or receive for sale or distribution, or attempt to purchase or receive for sale or distribution, or export

3.9.2 Such products outside the scope of UL 621 "Ice Cream Makers," Edition 7, dated May 07, 2010, with revisions through September 16, 2020, as of December 26, 2023—with refrigerant charge sizes greater than 500 g

Applicability Criteria: Uses any of the following: R-402A, R-402B, R-404A, R-407A, R-407B, R-407C, R-407F, R-407H, R-408A, R-410A, R-410B, R-411A, R-411B, R-417A, R-417C, R-420A, R-421A, R-421B, R-422A, R-422B, R-422C, R-422D, R-424A, R-426A, R-427A, R-428A, R-434A, R-437A, R-438A, R-507A, HFC-134a, HFC-227ea, R-125/290/134a/600a (55/1/42.5/1.5), RB-276, RS-24 (2002 formulation), RS-44 (2003 formulation), GHG-X5, or Freeze 12 (40 CFR 84.54(a)(9)(ii))

Compliance Dates	Rules
January 1, 2027	No person may manufacture or import
January 1, 2030	No person may sell, distribute, offer for sale or distribution, make available for sale or distribution, purchase or receive for sale or distribution, or attempt to purchase or receive for sale or distribution, or export

3.9.3 Such products within the scope of UL 621 "Ice Cream Makers," Edition 7, dated May 07, 2010, with revisions through September 16, 2020, as of December 26, 2023

Applicability Criteria: Uses any of the following: R-402A, R-402B, R-404A, R-407A, R-407B, R-407C, R-407F, R-407H, R-408A, R-410A, R-410B, R-411A, R-411B, R-417A, R-417C, R-420A, R-421A, R-421B, R-422A, R-422B, R-422C, R-422D, R-424A, R-426A, R-427A, R-428A, R-434A, R-437A, R-438A, R-507A, HFC-134a, HFC-227ea, R-125/290/134a/600a (55/1/42.5/1.5), RB-276, RS-24 (2002 formulation), RS-44 (2003 formulation), GHG-X5, or Freeze 12 (40 CFR 84.54(a)(9)(iii))

Compliance Dates	Rules
January 1, 2028	No person may manufacture or import
January 1, 2031	No person may sell, distribute, offer for sale or distribution, make available for sale or distribution, purchase or receive for sale or distribution, or attempt to purchase or receive for sale or distribution, or export

3.10 Chillers, when a stand-alone product

3.10.1 Chillers for comfort cooling

Applicability Criteria: Uses a regulated substance, or a blend containing a regulated substance, with a GWP of 700 or greater

Compliance Dates	Rules
January 1, 2025	No person may manufacture or import
January 1, 2028	No person may sell, distribute, offer for sale or distribution, make available for sale or distribution, purchase or receive for sale or distribution, or attempt to purchase or receive for sale or distribution, or export

3.10.2 Chillers for ice rinks

Applicability Criteria: Uses a regulated substance, or a blend containing a regulated substance, with a GWP of 700 or greater

Compliance Dates	Rules
January 1, 2025	No person may manufacture or import
January 1, 2028	No person may sell, distribute, offer for sale or distribution, make available for sale or distribution, purchase or receive for sale or distribution, or attempt to purchase or receive for sale or distribution, or export

3.10.3 Chillers for industrial process refrigeration where the temperature of the fluid exiting the chiller is greater than -30 °C (-22 °F)

Applicability Criteria: Uses a regulated substance, or a blend containing a regulated substance, with a GWP of 700 or greater

Compliance Dates	Rules
January 1, 2026	No person may manufacture or import
January 1, 2029	No person may sell, distribute, offer for sale or distribution, make available for sale or distribution, purchase or receive for sale or distribution, or attempt to purchase or receive for sale or distribution, or export

3.10.4 Chillers for industrial process refrigeration where the temperature of the fluid exiting the chiller is greater than or equal to -50 °C (-58 °F) and less than or equal to -30 °C (-22 °F)

Applicability Criteria: Uses a regulated substance, or a blend containing a regulated substance, with a GWP of 700 or greater

Compliance Dates	Rules
January 1, 2028	No person may manufacture or import
January 1, 2031	No person may sell, distribute, offer for sale or distribution, make available for sale or distribution, purchase or receive for sale or distribution, or attempt to purchase or receive for sale or distribution, or export

3.11 Industrial process refrigeration products, other than chillers

3.11.1 Such products with a refrigerant charge capacity of 200 pounds or greater and with the refrigerant temperature entering the evaporator higher than -30 °C (-22 °F)

Applicability Criteria: Uses a regulated substance, or a blend containing a regulated substance, with a GWP of 150 or greater

Compliance Dates	Rules
January 1, 2026	No person may manufacture or import
January 1, 2029	No person may sell, distribute, offer for sale or distribution, make available for sale or distribution, purchase or receive for sale or distribution, or attempt to purchase or receive for sale or distribution, or export

3.11.2 Such products with a refrigerant charge capacity less than 200 pounds and with the refrigerant temperature entering the evaporator higher than -30 °C (-22 °F)

Applicability Criteria: Uses a regulated substance, or a blend containing a regulated substance, with a GWP of 300 or greater

Compliance Dates	Rules
January 1, 2026	No person may manufacture or import
January 1, 2029	No person may sell, distribute, offer for sale or distribution, make available for sale or distribution, purchase or receive for sale or distribution, or attempt to purchase or receive for sale or distribution, or export

3.11.3 Such products where the temperature of the refrigerant entering the evaporator is greater than or equal to -50 °C (-58 °F) and is less than or equal to -30 °C (-22 °F)

Applicability Criteria: Uses a regulated substance, or a blend containing a regulated substance, with a GWP of 700 or greater

Compliance Dates	Rules
January 1, 2028	No person may manufacture or import
January 1, 2031	No person may sell, distribute, offer for sale or distribution, make available for sale or distribution, purchase or receive for sale or distribution, or attempt to purchase or receive for sale or distribution, or export

4. System Installation

The AIM Act prohibits the installation of certain new or used HFC-containing systems in certain subsectors after certain dates, as identified in this section. The following actions, upon charging the system to full charge, are considered an installation of a refrigeration, air conditioning, and heat pump system:

- Assembling a system for the first time from used or new components
- Increasing the cooling capacity, in BTU per hour, of an existing system
- Replacing 75 percent or more of evaporators (by number) and 100 percent of the compressor racks, condensers, and connected evaporator loads of an existing system

Note that equipment in existence in the United States prior to December 27, 2020, is exempt from these requirements. See 40 CFR 84.56 for details and other exemptions.

Also note that the compliance date for the installation of industrial process refrigeration systems with a January 1, 2026 compliance date, retail food-supermarket, cold storage warehouse, and ice rink subsectors is extended one year beyond the specified compliance date when an approved building permit issued prior to October 5, 2023 specifies the use of a restricted regulated substance, or blend containing a regulated substance, in a system detailed in that permit.

See Definitions section for details on product categories.

4.1 Residential or light commercial air conditioning or heat pump products, except for variable refrigerant flow air-conditioning and heat pump systems

Applicability Criteria: Uses a regulated substance, or a blend containing a regulated substance, with a GWP of 700 or greater

Compliance Date	Rule
January 1, 2025*	No person may install any system, nor have any such system be installed through their position as a designer, owner, or operator of that system

*New residential and light commercial air-conditioning and heat pump systems may be installed prior to January 1, 2026, where all specified components of that system are manufactured or imported prior to January 1, 2025.

4.2 Variable refrigerant flow systems for use as residential or light commercial air-conditioning or heat pumps

Applicability Criteria: Uses a regulated substance, or a blend containing a regulated substance, with a GWP of 700 or greater

Compliance Date	Rule
January 1, 2026*	No person may install any system, nor have any such system be installed through their position as a designer, owner, or operator of that system

* Such new variable refrigerant flow systems may be installed prior to January 1, 2027, where all specified components of that system are manufactured or imported prior to January 1, 2026. Such new variable refrigerant flow systems may be installed prior to January 1, 2028, when an approved building permit issued prior to October 5, 2023, specifies the use of a restricted regulated substance, or blend containing a restricted regulated substance, in such system detailed in that building permit, and where all specified components of that system are manufactured or imported prior to January 1, 2026.

4.3 Chillers for comfort cooling

Applicability Criteria: Uses a regulated substance, or a blend containing a regulated substance, with a GWP of 700 or greater

Compliance Date	Rule
January 1, 2025	No person may install any system, nor have any such system be installed through their position as a designer, owner, or operator of that system

4.4 Ice rinks

Applicability Criteria: Uses a regulated substance, or a blend containing a regulated substance, with a GWP of 700 or greater

Compliance Date	Rule
January 1, 2025	No person may install any system, nor have any such system be installed through their position as a designer, owner, or operator of that system

4.5 Chillers for industrial process refrigeration where the temperature of the fluid exiting the chiller is greater than -30 °C (-22 °F)

Applicability Criteria: Uses a regulated substance, or a blend containing a regulated substance, with a GWP of 700 or greater

Compliance Date	Rule
January 1, 2026	No person may install any system, nor have any such system be installed through their position as a designer, owner, or operator of that system

4.6 Chillers for industrial process refrigeration where the temperature of the fluid exiting the chiller is greater than or equal to -50 °C (-58 °F) and less than or equal to -30 °C (-22 °F)

Applicability Criteria: Uses a regulated substance, or a blend containing a regulated substance, with a GWP of 700 or greater

Compliance Date	Rule
January 1, 2028	No person may install any system, nor have any such system be installed through their position as a designer, owner, or operator of that system

4.7 Refrigerated transport—intermodal containers with the temperature of the refrigerant entering the evaporator (for direct heat exchange systems) or the temperature of the fluid exiting (for chillers) of -50 °C (-58 °F) or higher

Applicability Criteria: Uses a regulated substance, or a blend containing a regulated substance, with a GWP of 700 or greater

Compliance Date	Rule
January 1, 2025	No person may install any system, nor have any such system be installed through their position as a designer, owner, or operator of that system

4.8 Refrigerated transport—road or refrigerated transport—marine systems

Applicability Criteria: Uses any of the following: R-402A, R-402B, R-404A, R-407B, R-408A, R-410B, R-417A, R-421A, R-421B, R-422A, R-422B, R-422C, R-422D, R-424A, R-428A, R-434A, R-438A, R-507A, R-125/290/134a/600a (55/1/42.5/1.5), RS-44 (2003 formulation) or GHG-X5 (40 CFR 84.54(c)(8))

Compliance Date	Rule
January 1, 2025	No person may install any system, nor have any such system be installed through their position as a designer, owner, or operator of that system

4.9 Cold storage warehouse systems

4.9.1 Such systems with a refrigerant charge capacity of 200 pounds or greater, that are not the high temperature side of a cascade system

Applicability Criteria: Uses a regulated substance, or a blend containing a regulated substance, with a GWP of 150 or greater

Compliance Date	Rule
January 1, 2026	No person may install any system, nor have any such system be installed through their position as a designer, owner, or operator of that system

4.9.2 Such systems with a refrigerant charge capacity less than 200 pounds

Applicability Criteria: Uses a regulated substance, or a blend containing a regulated substance, with a GWP of 300 or greater

Compliance Date	Rule
January 1, 2026	No person may install any system, nor have any such system be installed through their position as a designer, owner, or operator of that system

4.9.3 Cascade refrigerant systems—in cold storage warehouse systems

Applicability Criteria: Uses a regulated substance, or a blend containing a regulated substance, with a GWP of 300 or greater

Compliance Date	Rule
January 1, 2026	No person may install any system, nor have any such system be installed through their position as a designer, owner, or operator of that system

4.10 Industrial process refrigeration systems, other than chiller systems

4.10.1 Such systems with a refrigerant charge capacity of 200 pounds or greater and with the refrigerant temperature entering the evaporator higher than -30 °C (-22 °F), that are not the high temperature side of a cascade system

Applicability Criteria: Uses a regulated substance, or a blend containing a regulated substance, with a GWP of 150 or greater

Compliance Date	Rule
January 1, 2026	No person may install any system, nor have any such system be installed through their position as a designer, owner, or operator of that system

4.10.2 Such systems with a refrigerant charge capacity less than 200 pounds and with the refrigerant temperature entering the evaporator higher than -30 °C (-22 °F)

Applicability Criteria: Uses a regulated substance, or a blend containing a regulated substance, with a GWP of 300 or greater

Compliance Date	Rule
January 1, 2026	No person may install any system, nor have any such system be installed through their position as a designer, owner, or operator of that system

4.10.3 The high temperature side of cascade systems with the refrigerant temperature entering the evaporator higher than -30 °C (-22 °F)

Applicability Criteria: Uses a regulated substance, or a blend containing a regulated substance, with a GWP of 300 or greater

Compliance Date	Rule
January 1, 2026	No person may install any system, nor have any such system be installed through their position as a designer, owner, or operator of that system

4.10.4 Such systems where the temperature of the refrigerant entering the evaporator is greater than or equal to -50 °C (-58 °F) and is less than or equal to -30 °C (-22 °F)

Applicability Criteria: Uses a regulated substance, or a blend containing a regulated substance, with a GWP of 700 or greater

Compliance Date	Rule
January 1, 2028	No person may install any system, nor have any such system be installed through their position as a designer, owner, or operator of that system

4.11 Remote condensing units in retail food refrigeration systems

4.11.1 Such systems with a refrigerant charge capacity of 200 pounds or greater, that are not on the high temperature side of a cascade system

Applicability Criteria: Uses a regulated substance, or a blend containing a regulated substance, with a GWP of 150 or greater

Compliance Date	Rule
January 1, 2026	No person may install any system, nor have any such system be installed through their position as a designer, owner, or operator of that system

4.11.2 Such systems with a refrigerant charge capacity less than 200 pounds

Applicability Criteria: Uses a regulated substance, or a blend containing a regulated substance, with a GWP of 300 or greater

Compliance Date	Rule
January 1, 2026	No person may install any system, nor have any such system be installed through their position as a designer, owner, or operator of that system

4.11.3 Cascade refrigerant systems—in remote condensing units in retail food refrigeration)

Applicability Criteria: Uses a regulated substance, or a blend containing a regulated substance, with a GWP of 300 or greater

Compliance Date	Rule
January 1, 2026	No person may install any system, nor have any such system be installed through their position as a designer, owner, or operator of that system

4.12 Supermarket systems

4.12.1 Such systems with a refrigerant charge capacity of 200 pounds or greater, that are not the high temperature side of a cascade system

Applicability Criteria: Uses a regulated substance, or a blend containing a regulated substance, with a GWP of 150 or greater

Compliance Date	Rule
January 1, 2027	No person may install any system, nor have any such system be installed through their position as a designer, owner, or operator of that system

4.12.2 Such systems with a refrigerant charge capacity less than 200 pounds

Applicability Criteria: Uses a regulated substance, or a blend containing a regulated substance, with a GWP of 300 or greater

Compliance Date	Rule
January 1, 2027	No person may install any system, nor have any such system be installed through their position as a designer, owner, or operator of that system

4.12.3 Cascade refrigerant systems—in supermarket systems

Applicability Criteria: Uses a regulated substance, or a blend containing a regulated substance, with a GWP of 300 or greater

Compliance Date	Rule
January 1, 2027	No person may install any system, nor have any such system be installed through their position as a designer, owner, or operator of that system

4.13 Automatic commercial ice machines with a remote condenser

Applicability Criteria: Uses any of the following: R-402A, R-402B, R-404A, R-407B, R-408A, R-410B, R-417A, R-421A, R-421B, R-422A, R-422B, R-422C, R-422D, R-424A, R-428A, R-434A, R-438A, R-507A, R-125/290/134a/600a (55/1/42.5/1.5), RS-44 (2003 formulation), or GHG-X5 (40 CFR 84.54(c)(14))

Compliance Date	Rule
January 1, 2027	No person may install any system, nor have any such system be installed through their position as a designer, owner, or operator of that system

4.14 Refrigerated food processing and dispensing equipment with a remote condenser

Applicability Criteria: Uses any of the following: R-402A, R-402B, R-404A, R-407A, R-407B, R-407C, R-407F, R-407H, R-408A, R-410A, R-410B, R-411A, R-411B, R-417A, R-417C, R-420A, R-421A, R-421B, R-422A, R-422B, R-422C, R-422D, R-424A, R-426A, R-427A, R-428A, R-434A, R-437A, R-438A, R-507A, HFC-134a, HFC-227ea, R-125/290/134a/600a (55/1/42.5/1.5), RB-276, RS-24 (2002 formulation), RS-44 (2003 formulation), GHG-X5, or Freeze 12 (40 CFR 84.54(c)(15))

Compliance Date	Rule
January 1, 2027	No person may install any system, nor have any such system be installed through their position as a designer, owner, or operator of that system

Definitions

For a full list of definitions relating to Section 2, Appliance Management, see 40 CFR 84.102.

For a full list of definitions relating to Section 3, Product Availability, and Section 4, System Installation, see 40 CFR 84.52.

Batch type ice maker means an ice maker having alternate freezing and harvesting periods.

Comfort cooling means the refrigerant-containing appliances used for air conditioning to provide cooling in order to control heat and/or humidity in occupied facilities including but not limited to residential, office, and commercial buildings. Comfort cooling appliances include but are not limited to chillers, commercial split systems, dual-function heat pumps, and packaged roof-top units.

Commercial refrigeration means the refrigerant-containing appliances used in the retail food and cold storage warehouse subsectors. Retail food appliances include the refrigerant-containing appliances found in supermarkets, convenience stores, restaurants, and other food service establishments. Cold storage includes the refrigerant-containing appliances used to store meat, produce, dairy products, and other perishable goods.

Continuous type ice maker means an ice maker that continually freezes and harvests ice at the same time.

Industrial process refrigeration means complex customized refrigerant-containing appliances that are directly linked to the processes used in, for example, the chemical, pharmaceutical, petrochemical, and manufacturing industries. This sector also includes industrial ice machines, appliances used directly in the generation of electricity, and ice rinks. Where one appliance is used for both industrial process refrigeration and other applications, it will be considered industrial process refrigeration equipment if 50 percent or more of its operating capacity is used for industrial process refrigeration.

Owner or operator means any person who owns, leases, operates, or controls any equipment, or who controls or supervises any practice, process, or activity that is subject to any requirement pursuant to this subpart.

Product means an item or category of items manufactured from raw or recycled materials which performs a function or task and is functional upon completion of manufacturing. The term includes, but is not limited to: appliances, foams, fully formulated polyols, self-contained fire suppression devices, aerosols, pressurized dispensers, and wipes.

Retire, as it relates to a refrigerant-containing appliance, means the removal of the refrigerant and the disassembly or impairment of the refrigerant circuit such that the appliance as a whole is rendered unusable by any person in the future.

Retrofit, as it relates to a refrigerant-containing appliance, means to convert an appliance from one refrigerant to another refrigerant. Retrofitting includes the conversion of the appliance to achieve system compatibility with the new refrigerant and may include, but is not limited to, changes in lubricants, gaskets, filters, driers, valves, o-rings, or appliance components.

Specified component for purposes of equipment in the refrigeration, air conditioning, and heat pump sector means condensing units, condensers, compressors, evaporator units, and evaporators.

System means an assemblage of separate components that typically are connected and charged in the field with a regulated substance or substitute to perform a function or task.

Sources

40 CFR 84 – Phasedown of Hydrofluorocarbons (EPA Final Rule), https://www.ecfr.gov/current/title-40/chapter-I/subchapter-C/part-84

- 40 CFR 84 Subpart C – Management of Regulated Substances (relating to Section 2, Appliance Management), https://www.ecfr.gov/current/title-40/chapter-I/subchapter-C/part-84/subpart-C
- 40 CFR 84 Subpart B – Restrictions on the Use of Hydrofluorocarbons (relating to Section 3, Product Availability, and Section 4, System Installation), https://www.ecfr.gov/current/title-40/chapter-I/subchapter-C/part-84/subpart-B

42 USC 7675 – American Innovation and Manufacturing Act (Federal AIM Act), https://uscode.house.gov/view.xhtml?req=granuleid:USC-prelim-title42-section7675&num=0&edition=prelim

Section 608 Technician Certification Requirements | US EPA, https://www.epa.gov/section608/section-608-technician-certification-requirements