

Chapter 173-443 WAC

HYDROFLUOROCARBONS (HFCs) AND OTHER FLUORINATED GREENHOUSE GASES

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WAC 173-443-010 Policy and purpose.

- (1) Ecology's policy under chapters 70A.15 and 43.21A RCW is to provide for the systematic control of air pollution from air contaminant sources. Ecology's policy under chapter ~~70A.45-70A.60~~ RCW is to reduce the emissions of HFCs and other fluorinated greenhouse gases.
- (2) This chapter establishes requirements for the transition to less damaging HFCrefrigerants ~~or suitable substitutes~~ in the air conditioning and refrigeration, aerosol propellant, and foam end-use categories in Washington in a manner similar to rules adopted under EPA's Significant New Alternative Policy (SNAP) program and refrigerant management regulations -and HFC rules adopted ~~or proposed for adoption~~ by other states around the country (RCW ~~70A.45.080~~70A.60.005).

WAC 173-443-020 Applicability.

(1) The requirements of this chapter apply to:

- (a) A-any person who offers for sale, leases, rents, installs, or otherwise causes to enter into Washington commerce any product or equipment that contains, ~~uses, or will or~~ uses a regulated refrigerant, HFCs or other substitutes for an end-use listed in WAC 173-443-040;
- (b) A person who owns or operates a stationary refrigeration or air conditioning system, as defined in WAC 173-443-030;
- (c) A person who installs, repairs, maintains, services, replaces, or disposes of a stationary refrigeration or air conditioning system, as defined in WAC 173-443-030; and
- (a)(d) A person who distributes, reclaims, or recycles a refrigerant with a high global warming potential (GWP).~~(2) Labeling requirements.~~

~~(a) The labeling requirements in WAC 173-443-070 apply to manufacturers of products or equipment that contains, uses, or will use HFCs as of July 28, 2019, or to manufacturers that introduce such products or equipment into Washington commerce after that date.~~

~~(b) A manufacturer may apply the applicability determination in (a) of this subsection to separate divisions or similar segments of its business based on the end-use that products associated with each division or similar segmentation are intended to serve.~~

WAC 173-443-030 Definitions and acronyms.

"Aerosol propellant" means a liquid or compressed gas that is used in whole or in part, such as a cosolvent, to expel a liquid or other material from the same self-pressurized container or from a separate container.

“Air conditioning” means the process of treating air to meet the requirements of a conditioned space by controlling its temperature, humidity, cleanliness, or distribution. Air conditioning includes chillers, except for purposes of GWP thresholds under WAC 173-443-040, and heat pumps. Air conditioning applies to stationary equipment and does not apply to mobile air conditioning, including those used in motor vehicles, rail and trains, aircraft, watercraft, recreational vehicles, recreational trailers, and campers (RCW 70A.60.010)

“Applicant” means, for purposes of this regulation, any person who sells, leases, rents, installs, uses, or otherwise enters into Washington commerce any substance in end-uses listed in WAC 173-443-040(2) or (3) "who applies for a variance under WAC 173-443-080.

Bunstock" or "bun stock" means a large solid box-like structure formed during the production of polyurethane, polyisocyanurate, phenolic, or polystyrene insulation.

"C" means Centigrade.

“Capital cost” means an expense incurred in the production of goods or in rendering services, including but not limited to, the cost of engineering, purchase, and installation of components or systems, and instrumentation, and contractor and construction fees.

"Centrifugal chiller" means air conditioning equipment that utilizes a centrifugal compressor in a vapor-compression refrigeration cycle typically used for commercial comfort air conditioning. Under this definition, a centrifugal chiller is a chiller intended for comfort cooling and does not include chillers for industrial process cooling and refrigeration.

“Chiller” means a water or heat transfer fluid chilling equipment package custom built in place or a factory-made and prefabricated assembly of one or more compressors, condensers and evaporators, with interconnections and accessories including controls, designed for the purpose of cooling or heating water or a heat transfer fluid. A chiller is a machine specifically designed to make use of a vapor compression cycle or absorption refrigeration cycle to transfer heat from a cold water or heat transfer fluid circulating system to the air, a heat transfer fluid, or other heat exchange media. Chillers can be water-cooled, or evaporatively cooled. Chillers include, but are not limited to, rotary chillers, centrifugal chillers, and positive displacement chillers, including reciprocating, scroll, and screw chillers.

"Code" means a collection of letters, numbers, graphics, or symbols that translates into a form that conveys the information provided by a dedicated or existing product label, or that can convey a user or reader to that information through electronic means (such as a QR code).

"Cold storage warehouse" means a cooled facility designed to store meat, produce, dairy products, and other products that are delivered to other locations for sale to the ultimate consumer.

“Commercial ice machine” means a nonresidential ice machine or ice maker used in a commercial establishment to produce ice artificially for consumer use, including but not limited to, a hotel, restaurant, or convenience store.

"Commercial refrigeration equipment" means equipment designed to store and display chilled or frozen goods for commercial sale or use, including, but not limited to, stand-alone units, refrigerated food processing and dispensing equipment, remote condensing units, supermarket systems, and vending machines.

"Component" means a part of a refrigeration system including, but not limited to, condensing units, compressors, evaporators, and receivers; and all of its connections and subassemblies, without which the refrigeration system will not properly function or will be subject to failures.

"Cumulative replacement" means the addition of or change in multiple components within a three-year period.

"Date of manufacture" means:

(1) For air conditioning and refrigeration equipment, the date the manufacturer affixed an equipment label indicating the equipment's date of manufacturer;

(2) For refrigeration and air conditioning equipment built up and completed onsite, the date that the refrigerant circuit was completed and initially filled with refrigerant; or

(3) For foam products imported into the state from outside the United States, the date the foam was originally manufactured, or the date of import if the original manufacture date is not known.

"Dedicated label" means a label adhered or attached to a product, or otherwise included with the product, that is designed to convey required information to the end-user of that product on the inclusion or use of substitutes associated with that product.

"EPA" means the U.S. Environmental Protection Agency.

"Ecology" means the department of ecology.

"End-use" means processes or classes of specific applications within industry sectors including, but not limited to, those listed in WAC 173-443-040.

"Equipment" means a collection of components assembled or manufactured to function together that contains at least one product, or that is in and of itself a product.

"Existing product label" means a label adhered or attached to a product, such as a nameplate or sticker, or to the box or packaging enclosing the product that discloses the ~~substitute refrigerant~~ contained, ~~used, or to be or~~ used in the product.

"F" means Fahrenheit.

"Flexible polyurethane" means a nonrigid polyurethane foam including, but not limited to, that used in furniture, bedding, and chair cushions.

"Foam" means a product with a cellular structure formed via a foaming process in a variety of materials that undergo hardening via a chemical reaction or phase transition.

"Foam blowing agent" means a substance that functions as a source of gas to generate bubbles or cells in the mixture during the formation of foam.

"Foam system" means a multipart liquid product that expands when mixed to form a foam.

"Force majeure" means, for purposes of this regulation, a sudden and unforeseeable event involving a clear danger, demanding action to prevent or mitigate the loss of, or damage to, life, health, property, or essential public services, arising from causes beyond the control of the applicant, which delays or prevents the performance of any obligation under this chapter, despite the applicant's best efforts to fulfill the obligation. This includes events where the local government or State of Washington, or federal government issues a declaration of emergency, which can include war, natural disasters, or pandemics. This does not include financial inability to perform to perform which is unrelated to the event as described in this section.

"Full charge," "optimal charge," or "critical charge" means the amount of refrigerant required in the refrigerant circuit for normal operating characteristics and conditions of a refrigeration system or appliance, as determined by using one or a combination of the following four methods:

- (1) Use of the equipment manufacturer's specifications of the full charge;
- (2) Use of appropriate calculations based on component sizes, density of refrigerant, volume of piping, seasonal variances, 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; or
- (4) The midpoint of an established range for full charge based on the best available data regarding the normal operating characteristics and conditions for the system.

"Global Warming Potential," "GWP," "Global Warming Potential Value," or "GWP Value" means 100-year GWP value as it appears in WAC 173-441-040, and if not contained in WAC 173-443-040, then the GWP value means the 100-year GWP value published by the Intergovernmental Panel on Climate Change (IPCC) in its Fifth Assessment Working Group 1 Report (AR5) (IPCC, 2013).

"Heat transfer fluid" means any gas or liquid used for the purpose of transmitting heat from one place to another.

"HFC" means hydrofluorocarbon as the term is defined in RCW 70A.60.010.

"Household refrigerators and freezers" means refrigerators, refrigerator-freezers, freezers, and miscellaneous household refrigeration appliances intended for residential use. "Household

refrigerators and freezers" does not include "household refrigerators and freezers - Compact," or "household refrigerators and freezers - Built-in."

"Household refrigerators and freezers - Built-in" means any refrigerator, refrigerator-freezer or freezer intended for residential use with 7.75 cubic feet or greater total volume and twenty-four inches or less depth not including doors, handles, and custom front panels; with sides which are not finished and not designed to be visible after installation; and that is designed, intended, and marketed exclusively to be: Installed installed totally encased by cabinetry or panels that are attached during installation; securely fastened to adjacent cabinetry, walls or floor; and equipped with an integral factory-finished face or accept a custom front panel.

"Household refrigerators and freezers - Compact" means any refrigerator, refrigerator-freezer or freezer intended for residential use with a total refrigerated volume of less than 7.75 cubic feet (220 liters).

"Ice rink" means a frozen body of water, hardened chemicals, or both, including but not limited to, professional ice skating ice-skating rinks and those used by the general public for recreational purposes.

"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. 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. Industrial process refrigeration not using a chiller is regulated as industrial process refrigeration equipment. Industrial process refrigeration using a chiller is regulated as a chiller for purposes of GWP thresholds applicable to new equipment.

"Integral skin polyurethane" means a self-skinning polyurethane foam including, but not limited to, that used in car steering wheels and dashboards.

"Low temperature refrigeration system" means a commercial or industrial process refrigeration system that maintains food, beverages, or other items at temperatures at or below 32 degrees Fahrenheit (0 degrees Celsius).

"Medium temperature refrigeration system" means a commercial or industrial process refrigeration systems that maintains food, beverages, or other items at temperatures above 32 degrees Fahrenheit (0 degrees Celsius).

"MDI" means metered dose inhaler or medical dose inhaler.

"Manufacturer" means any person, firm, association, partnership, corporation, governmental entity, organization, or joint venture that produces any product that contains or uses HFCs or is an importer or domestic distributor of such a product (RCW 70A.4560.010).

"New" means:

- (a) Products or equipment that are manufactured after the effective date of this chapter;
- (b) Products or equipment first installed for an intended purpose with new or used components;
- (c) Products or equipment expanded by the addition of components to increase system capacity after the effective date of this chapter; or
- (d) Products or equipment replaced or cumulatively replaced such that the cumulative capital cost of replacement exceeds fifty percent of the capital cost of replacing the whole system.

“Nonessential consumer products” means the following products if they are propelled by, contain, or manufactured with a chlorofluorocarbon, hydrochlorofluorocarbon, or hydrofluorocarbon:

- (a) Any plastic party streamer or noise horn including, but not limited to:
 - (i) String confetti;
 - (ii) Marine safety horns;
 - (iii) Sporting event horns;
 - (iv) Personal safety horns;
 - (v) Wall-mounted alarms used in factories or other work areas; and
 - (vi) Intruder alarms used in homes or cars.
- (b) Any cleaning fluid for electronic and photographic equipment:
 - (i) Including but not limited to liquid packaging, solvent wipes, solvent sprays, and gas sprays;
 - (ii) Except for those sold or distributed to a commercial purchaser.
- (c) Any plastic foam product, except any plastic foam product blown with CFC-11, but which contains no other Class I substances and where this product is used to provide thermal protection to external tanks for space vehicles.

"Nonretail foam products" means products consisting entirely of foam created solely to be an input for another product or manufacturing purpose resulting in another type of product.

"Online disclosure" means disclosing the substitute ~~contained, used, or to be used in products or equipment~~ used or the compliance status of the product or equipment, by ensuring that the information is available on an internet website that is accessible to the public free of charge.

“Operate” means to have operational control of the facility.

“Operator” means the person or entity having operational control of the facility.

“Other air-conditioning” or “other air-conditioning equipment” means any residential or non-residential air-conditioning equipment or air-conditioning system not otherwise defined as room air conditioner, wall air conditioner, window air conditioner, packaged terminal air conditioner

(PTAC), packaged terminal heat pump (PTHP), portable air conditioner, residential dehumidifier, or variable refrigerant flow (VRF) system.

“Other refrigeration” or “other refrigeration equipment” means any stationary, non-residential refrigeration equipment that is used for an application other than retail food, cold storage, ice rinks, industrial process refrigeration, or air conditioning; or is used for two or more applications including retail food, cold storage, ice rinks, industrial process refrigeration, commercial refrigeration, or air conditioning.

"Owner's manual" means a paper or online instructional book that is available for an end-use product, which provides basic information about the product.

“Packaged terminal air conditioner” or “PTAC” means a wall sleeve and a separate unencased combination of heating and cooling assemblies specified by the builder and intended for mounting through a wall. It includes a prime source of refrigeration, separable outdoor louvers, forced ventilation, and heating availability by builder’s choice of energy.

“Packaged terminal heat pump” or “PTHP” means a packaged terminal air conditioner that utilizes reverse cycle refrigeration as its prime heat source and can have supplementary heating availability by builder’s choice of energy.

"PSI" means pounds per square inch.

"Person" means an individual, partnership, franchise holder, association, corporation, a state, a city, a county, or any subdivision or instrumentality of the state (RCW 70A.4560-.010).

"Phenolic insulation board and bunstock" means phenolic insulation including, but not limited to, that used for roofing and wall insulation.

"Polyolefin" means foam sheets and tubes made of polyolefin, a macromolecule formed by the polymerization of olefin monomer units.

"Polystyrene extruded boardstock and Billet billet (XPS)" means a foam formed from polymers of styrene and produced on extruding machines in the form of continuous foam slabs which slabs, which can be cut and shaped into panels used for roofing, walls, flooring, and pipes.

"Polystyrene extruded sheet" means polystyrene foam including that used for packaging and buoyancy or floatation. It is also made into food-service items, including hinged polystyrene containers (for "take-out" from restaurants); food trays (meat and poultry) plates, bowls, and retail egg containers.

"Polyurethane" means a polymer formed principally by the reaction of an isocyanate and a polyol.

Portable air conditioner” means a portable encased assembly, other than a “packaged terminal air conditioner,” “room air conditioner,” or “dehumidifier,” that delivers cooled, conditioned air to an enclosed space, and is powered by a single-phase electric current. It includes a source of refrigeration and may include additional means for air circulation and heating.

"Positive displacement chiller" means vapor compression cycle chillers that use positive displacement compressors, typically used for commercial comfort air conditioning. Positive displacement chiller in this definition is a chiller intended for comfort cooling and does not include cooling for industrial process cooling and refrigeration.

"Product" means an article manufactured or refined for sale that contains or uses a regulated refrigerant or substitute.

"Refrigerant" or "refrigerant gas" means any substance, including blends and mixtures, which is used for heat transfer purposes and provides a cooling or warming effect.

"Refrigerant blend" means a mixture or combination of two or more single-component refrigerants.

"Refrigerated food processing and dispensing equipment" means retail food refrigeration equipment that is designed to process food and beverages dispensed via a nozzle that are intended for immediate or near-immediate consumption including, but not limited to, chilled and frozen beverages, ice cream, and whipped cream. This end-use excludes water coolers, or units designed solely to cool and dispense water.

"Refrigeration equipment" or "refrigeration system" means any stationary device that is designed to contain and use refrigerant. "Refrigeration equipment" includes refrigeration equipment used in retail food, cold storage, industrial process refrigeration and cooling that does not use a chiller, ice rinks, and other refrigeration applications (RCW 70A.60.010).

"Regulated refrigerant" means a class I or class II substance as listed in Title VI of section 602 of the federal clean act amendments of November 15, 1990 (RCW 70A.60.010).

"Remote condensing units" means retail refrigeration equipment or units that have a central condensing portion and may consist of one or more compressors, condensers, and receivers assembled into a single unit, which may be located external to the sales area. The condensing portion (and often other parts of the system) is located outside the space or area cooled by the evaporator. Remote condensing units are commonly installed in convenience stores, specialty shops (e.g., bakeries, butcher shops), supermarkets, restaurants, and other locations where food is stored, served, or sold.

"Residential dehumidifier" means a residential air-conditioning product, other than a portable air conditioner, room air conditioner, or packaged terminal air conditioner, that is a self-contained, electrically operated, portable, and mechanically encased assembly consisting of:

- (a) A refrigerated surface (evaporator) that condenses moisture from the atmosphere;
- (b) A refrigeration system, including an electric motor;
- (c) An air-circulating fan; and
- (d) A means of collecting and disposing of the condensate.

"Retail foam products" means products consisting entirely of foam that are created for the purpose of selling or otherwise providing that product in a finished state that does not involve any additional manufacturing or refinement.

"Retrofit" 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 (RCW 70A.4560.010).

"Rigid polyurethane and polyisocyanurate laminated boardstock" means laminated board insulation made with polyurethane or polyisocyanurate foam, including that used for roofing and walls.

"Rigid polyurethane appliance foam" means polyurethane foam in domestic appliances used for insulation.

"Rigid polyurethane commercial refrigeration and sandwich panels" means polyurethane foam used to provide insulation in walls and doors, including that used for commercial refrigeration equipment, and used in doors, including garage doors.

"Rigid polyurethane high-pressure two-component spray foam" means a liquid polyurethane foam system sold as two parts (i.e., A-side and B-side) in nonpressurized containers; and is field or factory applied in situ using high-pressure proportioning pumps at 800 - 1600 psi and an application gun to mix and dispense the chemical components.

"Rigid polyurethane low-pressure two-component spray foam" means a liquid polyurethane foam system sold as two parts (i.e., A-side and B-side) in containers that are pressurized to less than 250 psi during manufacture of the system for application without pumps; and are typically applied in situ relying upon a liquid blowing agent and/or gaseous foam blowing agent that also serves as a propellant.

"Rigid polyurethane marine flotation foam" means buoyancy or flotation polyurethane foam used in boat and ship manufacturing for both structural and flotation purposes.

"Rigid polyurethane one-component foam sealants" means a polyurethane foam generally packaged in aerosol cans that is applied in situ using a gaseous foam blowing agent that is also the propellant for the aerosol formulation.

"Rigid polyurethane slabstock and other" means a rigid closed-cell polyurethane foam formed into slabstock insulation for panels and fabricated shapes for pipes and vessels.

"Small container" means a container having more than two ounces and less than two pounds of a regulated refrigerant or substitute designed or intended for recharge of a motor vehicle air conditioning (MVAC) system or consumer appliance.

"Stand-alone low-temperature unit" means a stand-alone unit that maintains food or beverages at temperatures at or below 32°F (0°C).

"Stand-alone medium-temperature unit" means a stand-alone unit that maintains food or beverages at temperatures above 32°F (0°C).

"Stand-alone unit" means retail refrigerators, freezers, and reach-in coolers (either open or with doors) where all refrigeration components are integrated and, for the smallest types, the refrigeration circuit is entirely brazed or welded. These systems are fully charged with refrigerant at the factory and typically require only an electricity supply to begin operation.

"Substance" means any chemical, product substitute or alternative manufacturing process, whether new or retrofit, intended for use in an end-use listed in Tables 1, 2, 3, and 4 in WAC 174-443-040 (1) through ~~WAC~~173-443-040(4).

"Stationary" means the system is:

- (a) Installed in a building, structure, or facility;
- (b) Attached to a foundation, or if not attached, will reside at the same location for more than twelve consecutive months; or
- (c) Located intermittently at the same facility for at least two consecutive years and operates at that facility a total of at least ninety days each year.

"Substitute" means a chemical, product substitute, or alternative manufacturing process, whether existing or new, that is used to perform a function previously performed by a class I substance or class II substance and any substitute subsequently adopted to perform that function including, but not limited to, hydrofluorocarbons. "Substitute" does not include 2-BTP or any compound as applied to its use in aerospace fire extinguishing systems (RCW 70A.~~4560~~.010).

"Sufficient disclosure" means providing the name of the substitute or a compliance disclosure statement or providing alternative disclosure that meets the conditions of WAC 173-443-060(5).

"Supermarket systems" means multiplex or centralized retail food refrigeration equipment systems designed to cool or refrigerate, which operate with racks of compressors installed in a machinery room and which includes both direct and indirect systems.

"Symbol" means a graphical or hybrid word-graphical symbol for the purposes of conveying the types of substitutes used in the product or equipment and signaling that further information on the use of substitutes is available through online disclosure.

"Unit" means a collection of like products bundled together for purposes of commerce.

"Unit label" means a label adhered or attached, or capable of being adhered or attached, to a collection of like products bundled together for purposes of commerce.

"Vending machine" means a self-contained unit that dispenses goods that must be kept cold or frozen.

“Very low temperature refrigeration or cooling” means a refrigeration or cooling system that maintains temperatures below -58 degrees Fahrenheit (-50 degrees Celsius), including, but not limited to, medical and laboratory freezers, specialized industrial process cooling applications, and extreme temperature environmental testing.

WAC 173-443-040 List of prohibited substances.

(1) The tables Table 1 in this section lists substances prohibited in the refrigeration, air conditioning, aerosol propellant and foam ~~specific~~ end-uses and the effective date of prohibition, unless an exemption is provided for in WAC 173-443-050.

~~(2) Prohibitions for the aerosol propellants end-use category~~

TABLE 1. Refrigeration and air conditioning, aerosol propellants, and foams

End-Use Category: Aerosol Propellants		
End-Use	Prohibited Sub <u>stances</u>	Effective Date
Aerosol propellants	HFC-125, HFC-134a, HFC-227ea and blends of HFC-227ea and HFC-134a	January 1, 2020
End-Use Category: Air Conditioning		
End-Use	Prohibited Sub <u>stances</u>	Effective Date
Centrifugal chillers (new)	FOR12A, FOR12B, HFC-134a, HFC-227ea, HFC-236fa, HFC-245fa, R-125/134a/600a (28.1/70/1.9), R-125/290/134a/600a (55.0/1.0/42.5/1.5), R-404A, R-407C, R-410A, R-410B, R-417A, R-421A, R-422B, R-422C, R-422D, R-423A, R-424A, R-434A, R-438A, R-507A, RS-44 (2003 composition), THR-03	January 1, 2024
Positive displacement chillers (new)	FOR12A, FOR12B, HFC-134a, HFC-227ea, KDD6, R-125/134a/600a (28.1/70/1.9), R-125/290/134a/600a (55.0/1.0/42.5/1.5), R-404A, R-407C, R-410A, R-410B, R-417A, R-421A, R-422B, R-422C, R-422D, R-424A, R-434A, R-437A, R-438A, R-507A, RS-44 (2003 composition), SP34E, THR-03	January 1, 2024
End-Use Category: Refrigeration		
End-Use	Prohibited Sub <u>stances</u>	Effective Date
Cold storage warehouses (new)	HFC-227ea, R-125/290/134a/600a (55.0/1.0/42.5/1.5), R-404A, R-407A, R-407B, R-410A, R-410B, R-417A, R-421A, R-421B, R-422A, R-422B, R-422C, R-422D, R-423A, R-424A, R-428A, R-434A, R-438A, R-507A, RS-44 (2003 composition)	January 1, 2023

End-Use Category: Aerosol Propellants		
End-Use	Prohibited Substances	Effective Date
Household refrigerators and freezers (new)	FOR12A, FOR12B, HFC-134a, KDD6, R-125/290/134a/600a (55.0/1.0/42.5/1.5), R-404A, R-407C, R-407F, R-410A, R-410B, R-417A, 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-507A, RS-24 (2002 formulation), RS-44 (2003 formulation), SP34E, THR-03	January 1, 2022
Household refrigerators and freezers - Compact (new)	FOR12A, FOR12B, HFC-134a, KDD6, R-125/290/134a/600a (55.0/1.0/42.5/1.5), R-404A, R-407C, R-407F, R-410A, R-410B, R-417A, 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-507A, RS-24 (2002 formulation), RS-44 (2003 formulation), SP34E, THR-03	January 1, 2021
Household refrigerators and freezers - Built-in appliances (new)	FOR12A, FOR12B, HFC-134a, KDD6, R-125/290/134a/600a (55.0/1.0/42.5/1.5), R-404A, R-407C, R-407F, R-410A, R-410B, R-417A, 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-507A, RS-24 (2002 formulation), RS-44 (2003 formulation), SP34E, THR-03	January 1, 2023
Supermarket systems (retrofit)	R-404A, R-407B, R-421B, R-422A, R-422C, R-422D, R-428A, R-434A, R-507A	January 1, 2020
Supermarket systems (new)	HFC-227ea, R-404A, R-407B, R-421B, R-422A, R-422C, R-422D, R-428A, R-434A, R-507A	January 1, 2020
Remote condensing units (retrofit)	R-404A, R-407B, R-421B, R-422A, R-422C, R-422D, R-428A, R-434A, R-507A	January 1, 2020
Remote condensing units (new)	HFC-227ea, R-404A, R-407B, R-421B, R-422A, R-422C, R-422D, R-428A, R-434A, R-507A	January 1, 2020
Stand-alone units (retrofit)	R-404A, R-507A	January 1, 2020
Stand-alone medium-temperature units (new)	FOR12A, FOR12B, HFC-134a, HFC-227ea, KDD6, R-25/290/134a/600a (55.0/1.0/42.5/1.5), R-404A, R-407A, R-407B, R-407C, R-407F, R-410A, R-410B, R-417A, 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-507A, RS-24 (2002 formulation), RS-44 (2003 formulation), SP34E, THR-03	January 1, 2020

End-Use Category: Aerosol Propellants		
End-Use	Prohibited Substances	Effective Date
Stand-alone low-temperature units (new)	HFC-227ea, KDD6, R-125/290/134a/600a (55.0/1.0/42.5/1.5), R-404A, R-407A, R-407B, R-407C, R-407F, R-410A, R-410B, R-417A, R-421A, R-421B, R-422A, R-422B, R-422C, R-422D, R-424A, R-428A, R-434A, R-437A, R-438A, R-507A, RS-44 (2003 formulation)	January 1, 2020
Refrigerated food processing and dispensing equipment (new)	HFC-227ea, KDD6, R-125/290/134a/600a (55.0/1.0/42.5/1.5), R-404A, R-407A, R-407B, R-407C, R-407F, R-410A, R-410B, R-417A, R-421A, R-421B, R-422A, R-422B, R-422C, R-422D, R-424A, R-428A, R-434A, R-437A, R-438A, R-507A, RS-44 (2003 formulation)	January 1, 2021
Vending machines (retrofit)	R-404A, R-507A	January 1, 2022
Vending machines (new)	FOR12A, FOR12B, HFC-134a, KDD6, R-125/290/134a/600a (55.0/1.0/42.5/1.5), R-404A, R-407C, R-410A, R-410B, R-417A, R-421A, R-422B, R-422C, R-422D, R-426A, R-437A, R-438A, R-507A, RS-24 (2002 formulation), SP34E	January 1, 2022
End-Use Category: Foams		
End-Use	Prohibited Substances	Effective Date
Rigid polyurethane and polyisocyanurate laminated boardstock	HFC-134a, HFC-245fa, HFC-365mfc, and blends thereof	January 1, 2020
Flexible polyurethane	HFC-134a, HFC-245fa, HFC-365mfc, and blends thereof	January 1, 2020
Integral skin polyurethane	HFC-134a, HFC-245fa, HFC-365mfc, and blends thereof; Formacel TI, Formacel Z-6	January 1, 2020
Polystyrene extruded sheet	HFC-134a, HFC-245fa, HFC-365mfc, and blends thereof; Formacel TI, Formacel Z-6	January 1, 2020
Phenolic insulation board and bunstock	HFC-143a, HFC-134a, HFC-245fa, HFC-365mfc, and blends thereof	January 1, 2020
Rigid polyurethane slabstock and other	HFC-134a, HFC-245fa, HFC-365mfc, and blends thereof; Formacel TI, Formacel Z-6	January 1, 2020

End-Use Category: Aerosol Propellants		
End-Use	Prohibited Substances	Effective Date
Rigid polyurethane appliance foam	HFC-134a, HFC-245fa, HFC-365mfc, and blends thereof; Formacel TI, Formacel Z-6	January 1, 2020
Rigid polyurethane commercial refrigeration and sandwich panels	HFC-134a, HFC-245fa, HFC-365mfc, and blends thereof; Formacel TI, Formacel Z-6	January 1, 2020
Polyolefin	HFC-134a, HFC-245fa, HFC-365mfc, and blends thereof; Formacel TI, Formacel Z-6	January 1, 2020
Rigid polyurethane marine flotation foam	HFC-134a, HFC-245fa, HFC-365mfc, and blends thereof; Formacel TI, Formacel Z-6	January 1, 2020
Polystyrene extruded boardstock and billet (XPS)	HFC-134a, HFC-245fa, HFC-365mfc, and blends thereof; Formacel TI, Formacel B, Formacel Z-6	January 1, 2021
Rigid polyurethane high-pressure two-component spray foam	HFC-134a, HFC-245fa, and blends thereof; blends of HFC-365mfc with at least 4 percent HFC-245fa, and commercial blends of HFC-365mfc with 7 to 13 percent HFC-227ea and the remainder HFC-365mfc; Formacel TI	January 1, 2020
Rigid polyurethane low-pressure two-component spray foam	HFC-134a, HFC-245fa, and blends thereof; blends of HFC-365mfc with at least 4 percent HFC-245fa, and commercial blends of HFC-365mfc with 7 to 13 percent HFC-227ea and the remainder HFC-365mfc; Formacel TI	January 1, 2021
Rigid polyurethane one-component foam sealants	HFC-134a, HFC-245fa, and blends thereof; blends of HFC-365mfc with at least 4 percent HFC-245fa, and commercial blends of HFC-365mfc with 7 to 13 percent HFC-227ea and the remainder HFC-365mfc; Formacel TI	January 1, 2020

(2) Table 2 in this section lists additional prohibitions for new stationary refrigeration equipment containing more than 50 pounds of refrigerant, unless an exemption is provided for in WAC 173-443-050.

TABLE 2. Stationary refrigeration equipment

<u>End-Use</u>	<u>Criteria</u>	<u>Prohibited Substances</u>	<u>Effective Date</u>
<u>Retail refrigeration (New and existing facilities)</u>	<u>Refrigeration equipment (new) containing more than 50 pounds of refrigerant</u>	<u>Refrigerants with a GWP of 150 or more</u>	<u>January 1, 2025</u>
<u>Cold storage warehouses (New and existing facilities)</u>	<u>Refrigeration equipment (new) containing more than 50 pounds of refrigerant</u>	<u>Refrigerants with a GWP of 150 or more</u>	<u>January 1, 2025</u>
<u>Industrial process refrigeration excluding chillers (New facilities)</u>	<u>Refrigeration equipment (new) containing more than 50 pounds of refrigerant</u>	<u>Refrigerants with a GWP of 150 or more</u>	<u>January 1, 2025</u>
<u>Industrial process refrigeration excluding chillers (Existing facilities)</u>	<u>Refrigeration equipment (new) containing more than 50 pounds of refrigerant</u>	<u>Refrigerants with a GWP of 2,200 or more</u>	<u>January 1, 2025</u>
<u>Ice rinks (New facilities)</u>	<u>Refrigeration equipment (new) containing more than 50 pounds of refrigerant installed in a new facility</u>	<u>Refrigerants with a GWP of 150 or more</u>	<u>January 1, 2024</u>
<u>Ice rinks (Existing facilities)</u>	<u>Refrigeration equipment (new) containing more than 50 pounds of refrigerant installed in a new facility</u>	<u>Refrigerants with a GWP of 750 or more</u>	<u>January 1, 2024</u>

(3) Table 3 in this section lists additional prohibitions for new stationary air conditioning equipment and the effective date of prohibition, unless an exemption is provided for in WAC 173-443-050.

TABLE 3. Stationary air conditioning equipment

<u>End-Use</u>	<u>Prohibited Substances</u>	<u>Effective Date</u>
<u>Room/wall/window air conditioning equipment, PTACs, PTHPs, portable air conditioning equipment, and residential dehumidifiers (new) (New and existing facilities)</u>	<u>Refrigerants with a GWP of 750 or more</u>	<u>January 1, 2024</u>
<u>Other types of air conditioning equipment (new) used in residential and nonresidential applications (New and existing facilities)</u>	<u>Refrigerants with a GWP of 750 or more</u>	<u>January 1, 2025</u>

<u>End-Use</u>	<u>Prohibited Substances</u>	<u>Effective Date</u>
<u>Variable refrigerant flow (VRF) or volume system (new) (New and existing facilities)</u>	<u>Refrigerants with a GWP of 750 or more</u>	<u>January 1, 2026</u>

(4) Table 4 in this section lists prohibitions for chillers used for industrial process refrigeration.

TABLE 4. Chillers used for industrial process refrigeration

<u>End-Use</u>	<u>Prohibited Substances</u>	<u>Effective Date</u>
<u>Chillers – industrial process refrigeration designed for chilled fluid leaving the chiller at temperatures of > +35 degrees Fahrenheit</u>	<u>Refrigerants with a GWP of 750 or more</u>	<u>January 1, 2025</u>
<u>Chillers – industrial process refrigeration designed for chilled fluid leaving the chiller at temperatures of < 35 degrees Fahrenheit and > -10 degrees Fahrenheit</u>	<u>Refrigerants with a GWP of 1,500 or more</u>	<u>January 1, 2025</u>
<u>Chillers – industrial process refrigeration designed for chilled fluid leaving the chiller at temperatures of < -10 degrees Fahrenheit and > -58 degrees Fahrenheit</u>	<u>Refrigerants with a GWP of 2,200 or more</u>	<u>January 1, 2025</u>

(5) Table 5 in this section lists prohibitions for small cans of automotive refrigerant and nonessential consumer products, and the effective date of prohibition, unless an exemption is provided for in WAC 173-443-050.

TABLE 5. Refrigerant recharge containers and nonessential consumer products

<u>End-Use</u>	<u>Prohibited Substances</u>	<u>Effective Date</u>
<u>Small containers of refrigerant designed for consumer recharge of a motor vehicle air conditioning system or consumer appliance</u>	<u>Refrigerants with a GWP of 150 or more</u>	<u>July 25, 2021</u>
<u>Nonessential consumer products</u>	<u>Refrigerants with a GWP of 150 or more</u>	<u>July 25, 2021</u>

WAC 173-443-050 Exemptions applicable to WAC 173-443-040.

(1) Table 1 in this section ~~The following table~~ lists exemptions to the prohibitions in WAC 173-443-040, Table 1.

TABLE 1. Refrigeration and air conditioning, aerosol propellants, and foams exemptions.

End-Use Category	Prohibited Substances	Acceptable Uses/Exemptions
Aerosol propellants	HFC-134a	<p>Cleaning products for removal of grease;</p> <p>Flux and other soils from electrical equipment;</p> <p>Refrigerant flushes; products for sensitivity testing of smoke detectors;</p> <p>Lubricants and freeze sprays for electrical equipment or electronics;</p> <p>Sprays for aircraft maintenance;</p> <p>Sprays containing corrosion preventive compounds used in the maintenance of aircraft, electrical equipment or electronics, or military equipment;</p> <p>Pesticides for use near electrical wires, in aircraft, in total release insecticide foggers, or in certified organic use pesticides for which EPA has specifically disallowed all other lower-GWP propellants;</p> <p>Mold release agents and mold cleaners;</p> <p>Lubricants and cleaners for spinnerettes for synthetic fabrics;</p> <p>Duster sprays specifically for removal of dust from photographic negatives, semiconductor chips, specimens under electron microscopes, and energized electrical equipment;</p> <p>Adhesives and sealants in large canisters;</p> <p>Document preservation sprays;</p> <p>FDA-approved MDIs for medical purposes;</p> <p>Wound care sprays;</p> <p>Topical coolant sprays for pain relief;</p> <p>Products for removing bandage adhesives from skin;</p> <p>Bear spray; and</p> <p>and Pepper spray.</p>

End-Use Category	Prohibited Substances	Acceptable Uses/Exemptions
Aerosol propellants	HFC-227ea and blends of HFC-227ea and HFC-134a	FDA-approved MDIs for medical purposes.
<p>Air conditioning <u>Centrifugal chillers</u></p> <p><u>Positive displacement chillers</u></p>	HFC-134a	<p>Military marine vessels where reasonable efforts have been made to ascertain that other alternatives are not technically feasible due to performance or safety requirements;</p> <p><u>Replacement of a refrigeration component in an existing facility as part of normal maintenance if the cumulative replacement within any three-year period does not exceed 50 percent of the capital cost of replacing the entire refrigeration system or equipment; and</u></p> <p><u>Facilities with new refrigeration equipment with approved building permit applications before the effective date.</u></p>
<p>Air conditioning <u>Centrifugal chillers</u></p> <p><u>Positive displacement chillers</u></p>	HFC-134a and R-404A	<p>Human-rated spacecraft and related support equipment where reasonable efforts have been made to ascertain that other alternatives are not technically feasible due to performance or safety requirements;</p> <p><u>Replacement of a refrigeration component in an existing facility as part of normal maintenance if the cumulative replacement within any three-year period does not exceed 50 percent of the capital cost of replacing the entire refrigeration system or equipment; and</u></p> <p><u>Facilities with new refrigeration equipment with approved building permit applications before the effective date.</u></p>
Foams - Except rigid polyurethane spray foam	All substitutes	<p>Military applications where reasonable efforts have been made to ascertain that other alternatives are not technically feasible due to performance or safety requirements until January 1, 2022; and</p> <p><u>Space- and aeronautics-related applications where reasonable efforts have been made to ascertain that other alternatives are not technically feasible due to performance or safety requirements until January 1, 2025;</u></p>
Foams – Except rigid polyurethane spray foam	All substitutes	<p>Space- and aeronautics-related applications where reasonable efforts have been made to ascertain that other alternatives are not technically feasible due to</p>

End-Use Category	Prohibited Substances	Acceptable Uses
		performance or safety requirements until January 1, 2025.
Rigid polyurethane two-component spray foam	All substitutes	Military or space- and aeronautics-related applications where reasonable efforts have been made to ascertain that other alternatives are not technically feasible due to performance or safety requirements until January 1, 2025.

(2) Table 2 in this section lists exemptions to the stationary refrigeration end-use prohibitions in WAC 173-443-040, Table 2.

TABLE 2. Stationary refrigeration equipment

<u>End-Use</u>	<u>Prohibited Substances</u>	<u>Exemptions</u>
<u>Retail refrigeration equipment</u>	<u>Refrigerants with a GWP of 150 or more</u>	<p><u>Equipment with 50 pounds or less of refrigerant;</u></p> <p><u>Replacement of a refrigeration component in an existing facility as part of normal maintenance if the cumulative replacement within any three-year period does not exceed 50 percent of the capital cost of replacing the entire refrigeration system or equipment, excluding the cost of refrigerated display cases; and</u></p> <p><u>Facilities with new refrigeration equipment with approved building permit applications before the effective date.</u></p>
<u>Industrial process refrigeration, excluding chillers</u>	<u>Refrigerants with a GWP of 150 or more</u>	<p><u>Equipment with 50 pounds or less of refrigerant;</u></p> <p><u>Replacement of a refrigeration component in an existing facility as part of normal maintenance if the cumulative replacement within any three-year period does not exceed 50 percent of the capital cost of replacing the entire refrigeration system or equipment, excluding the cost of refrigerated display cases;</u></p>

<u>End-Use</u>	<u>Prohibited Substances</u>	<u>Exemptions</u>
		<p><u>Very low temperature (VLT) refrigeration or cooling uses; and</u></p> <p><u>Facilities with new refrigeration equipment with approved building permit applications before the effective date.</u></p>
<u>Cold storage warehouses</u>	<u>Refrigerants with a GWP of 150 or more</u>	<p><u>Equipment with 50 pounds or less of refrigerant;</u></p> <p><u>Replacement of a refrigeration component in an existing facility as part of normal maintenance if the cumulative replacement within any three-year period does not exceed 50 percent of the capital cost of replacing the entire refrigeration system or equipment, excluding the cost of refrigerated display cases; and</u></p> <p><u>Facilities with new refrigeration equipment with approved building permit applications before the effective date.</u></p>

(3) Table 3 in this section lists exemptions to the stationary air conditioning end-use prohibitions in WAC 173-443-040, Table 3.

TABLE 3. Stationary air conditioning equipment exemptions

<u>End-Use</u>	<u>Prohibited Substances</u>	<u>Exemptions</u>
<u>Room/wall/window air conditioning equipment, PTACs, PTHPs, portable air conditioning equipment, and residential dehumidifiers (new)</u>	<u>Refrigerants with a GWP of 750 or more</u>	<u>Facilities with new refrigeration equipment with approved building permit applications before the effective date.</u>
<u>Variable refrigerant flow (VRF) or volume system (new)</u>	<u>Refrigerants with a GWP of 750 or more</u>	<u>Facilities with new refrigeration equipment with approved building permit applications before the effective date.</u>
<u>Other types of air conditioning equipment (new) used in residential and nonresidential applications</u>	<u>Refrigerants with a GWP of 750 or more</u>	<u>Facilities with new refrigeration equipment with approved building permit applications before the effective date.</u>

WAC 173-443-060 Requirements applicable to refrigeration and air conditioning, aerosol propellants, and foam end-uses listed in WAC 173-443-040, Table 1. Prohibitions.

(1) Prohibitions. No person may offer for sale, lease, rent, install, or otherwise cause to enter into Washington commerce any product or equipment that contains or, ~~uses~~, ~~or will use~~ HFCs or other substitutes prohibited for an end-use in WAC 173-443-040 unless an exemption is provided for in WAC 173-443-050.

(2) Sell through provisions.

(a) Products and equipment manufactured prior to the applicable effective date of a prohibition in WAC 173-443-040 may be sold, leased, rented, imported, exported, distributed, installed, used, or otherwise introduced into Washington commerce after the date of prohibition.

~~(a) For products and equipment imported from outside the United States, the date of import may be considered the date of manufacture.~~

~~(b) For refrigeration equipment and chillers, the date the manufacturer affixed an equipment label indicating the equipment's date of manufacture is the date of manufacture.~~

~~(e)~~(a) Polyurethane foam systems manufactured (blended) before an applicable prohibition date and not yet applied on site may be used after the prohibition date.

~~(2)~~(3) Other allowances. Except where an existing system is retrofit, nothing in this chapter requires a person that acquired a product or equipment containing or using a prohibited substitute prior to the effective date of a prohibition in WAC 173-443-040 to cease use of that product or equipment.

~~(3)~~(4) Product labeling and disclosure.

(a) Except for products and equipment that use prohibited substitutes for an ~~acceptable exempt~~ use listed in WAC 173-443-050, a manufacturer must disclose the substitutes contained or, ~~used~~, ~~or to be used~~ in its products or equipment applicable to the end-uses listed in WAC 173-443-040, Table 1.

(b) This disclosure must occur no later than one year following an applicable prohibition date, or no later than January 10, 2021, whichever is later ~~one year following the effective date of this chapter~~.

(c) A manufacturer of aerosol propellant products must disclose the substitutes through one of following methods:

(i) For aerosol products regulated by the U.S. Consumer Product Safety Commission, the U.S. Food and Drug Administration excluding

prescription drug products, or products that are not covered by subsection (iib) of this ~~subsection~~:

(A) New dedicated label;

(B) Existing product label;

~~(C)~~ On-packaging label;

~~(C)(D)~~ A label required by another jurisdiction that discloses the compliance status of the product;

~~(D)(E)~~ On-product symbol or code; and online disclosure; or

~~(E)(F)~~ On-packaging symbol or code; and online disclosure.

(ii) For aerosol products regulated by EPA under the Federal Insecticide Fungicide and Rodenticide Act, aerosol products regulated by the Occupational Safety and Health Administration, or aerosol prescription drug products regulated by the U.S. Food and Drug Administration:

(A) Any option in ~~(aj)~~(Ai) through ~~(Fv)~~ of this subsection; or

(B) A product document, such as a Safety Data Sheet (SDS), that complies with the 29 C.F.R. 1910.1200; and online disclosure if the SDS is not posted online.

(d) A manufacturer of refrigeration products and equipment (including refrigeration products and equipment that contain foam) must disclose the substitutes through one of following methods:

(i) For the refrigerant used in household refrigerators and freezers, household refrigerators and freezers - Compact, and household refrigerators and freezers - Built-in:

(A) New dedicated label;

(B) Underwriters Laboratories or equivalent safety label;

~~(C) (iii) A label required by another jurisdiction with sufficient disclosure requirements;~~

~~(D)(C)~~ A label required by another jurisdiction that discloses the compliance status of the product~~does not disclose the substitute; and online disclosure;~~ or

~~(E)(D)~~ On-product or on-equipment symbol or code; and online disclosure.

- (ii) For the foam blown in or installed by the manufacturer of household refrigerators and freezers, household refrigerators and freezers - ~~Compact~~compact, and household refrigerators and freezers - Built-in:
 - (A) New dedicated label;
 - (B) Underwriters Laboratories or equivalent safety label;
 - (C) Owner's manual; or
 - (D) On-product or on-equipment symbol or code; and online disclosure.

- (iii) For the refrigerant used in commercial refrigeration equipment:
 - (A) New dedicated label;
 - (B) Existing product label;
 - (C) Underwriters Laboratories or equivalent safety label;
 - ~~(D) i A label required by another jurisdiction with sufficient disclosure requirements;~~
 - ~~(E)(D) (v) A label required by another jurisdiction that does not discloses the compliance status of the product or equipment the substitute; and online disclosure; or~~
 - ~~(F)(E) On-product or on-equipment symbol or code; and online disclosure.~~

- (iv) For the foam blown in or installed by the manufacturer of commercial refrigeration equipment:
 - (A) New dedicated label;
 - (B) Existing product label;
 - (C) Underwriters Laboratories or equivalent safety label;
 - (D) Owner's manual; or
 - (E) On-product or on-equipment symbol or code; and online disclosure.

- (e) A manufacturer of centrifugal or positive displacement chillers must disclose the substitutes through one of following methods:

- (i) For the refrigerant used in centrifugal and positive displacement chillers:
 - (A) New dedicated label;
 - (B) Existing product label;
 - (C) Underwriters Laboratories or equivalent safety label;
 - ~~(D) A label required by another jurisdiction with sufficient disclosure requirements;~~
 - ~~(E)(D) (v) A label required by another jurisdiction that **does not** disclosees the compliance status of the product or equipment; substitute; and online disclosure; or~~
 - ~~(F)(E) On-product or on-equipment symbol or code; and online disclosure.~~
- (ii) For the foam blown in or installed by the manufacturer of centrifugal and positive displacement chillers:
 - (A) New dedicated label;
 - (B) Existing product label;
 - (C) Underwriters Laboratories or equivalent safety label;
 - (D) Owner's manual; ~~or~~
 - ~~(E) A label required by another jurisdiction that discloses the compliance status of the product; or~~
 - ~~(F)(E) On-product or on-equipment symbol or code; and online disclosure.~~
- (f) A manufacturer of foam products must disclose the substitutes through one of following methods:
 - (i) For nonretail foam products:
 - (A) Unit label; or
 - (B) One of the following methods for each individual product within a unit:
 - (I) New dedicated label;
 - ~~(H) Existing product label;~~

~~(III)(II)(C)~~ A label required by another jurisdiction with sufficient disclosure requirements;

~~(IV)(III)~~ A label required by another jurisdiction that discloses ~~does not disclose~~ the compliance status of the product~~substitute; and online disclosure~~; or

~~(V)(IV)~~ On-product symbol or code; and online disclosure.

- (ii) For retail foam products:
 - (A) New dedicated label;
 - (B) Existing product label;
 - (C) On-packaging label;
 - (D) A label required by another jurisdiction that discloses the compliance status of the product or equipment~~does not disclose the substitute; and online disclosure~~;
 - (E) On-product symbol or code; and online disclosure; or
 - (F) On-packaging symbol or code; and online disclosure.
- (iii) For the foam blowing agent used in polyurethane foam systems, including spray foam systems:
 - (A) New dedicated label on the canister or cylinders;
 - (B) Existing product label on the canister or cylinders;
 - (C) On-packaging label;
 - (D) A label required by another jurisdiction that discloses ~~does not disclose~~ the compliance status of the product~~substitute; and online disclosure~~; or
 - (E) On-packaging symbol or code; and online disclosure.
- (g) Ecology must approve in advance the use of a symbol or code.
- (h) Ecology must approve in advance the use of another jurisdiction's disclosure label.
- (i) Online disclosure may occur through online publication of an owner's manual, safety data sheet, or other documentation that provides information about the product to the end-user of the product.

- (j) The requirements of this section do not apply to aircraft and aircraft components subject to certification requirements of the Federal Aviation Administration.

~~(4)~~(5) Alternative disclosure.

- (a) A manufacturer may use an alternative disclosure method to an on-product label described in WAC 173-443-060(4) provided the conditions in subsections (i) and (ii) and (iii) of this subsection are met.
 - (i) A manufacturer submits a written statement to ecology describing the condition that prevents use of an on-product label and proposing an alternative disclosure method for the particular product or equipment.
 - (ii) Ecology determines that use of an alternative disclosure method is warranted and that the proposed disclosure method satisfactorily communicates the substitutes used or the compliance status of the particular product or equipment.
 - ~~(iii)~~(iii) The manufacturer receives written confirmation from ecology that the proposed disclosure method may be used to satisfy WAC 173-443-060(4) for the particular product or equipment.
 - (iv) Ecology will provide a written response to a request for use of an alternative disclosure method by approving or denying the request, or requesting additional information, within thirty (30) days of receipt.

~~(5)~~(6) WAC 173-443-080 Manufacturer reporting notification.

- (a) A manufacturer of a product or equipment that contains or, -uses, -or will use HFCs or other substitutes as of July 28, 2020, prohibited for an end-use listed in WAC 173-443-040, Table 1, -or a representative on behalf of the manufacturer, must report to ecology consistent with WAC 173-443-~~090-060(7) and (8) and 173-443-100~~.
- (b) It is only necessary for one person or entity to report with respect to a particular product or equipment.
- (c) In the event of a failure by at least one person to provide a complete, accurate, and timely report for a product or equipment within a specific end-use, ecology will require information from the manufacturer associated with the product or equipment in the following order of precedence:
 - (i) The person or entity that manufactured, produced, or assembled the product or equipment, unless it has no presence in the United States.
 - (ii) The person or entity that marketed the product or equipment under its name or trademark, unless it has no presence in the United States.

- (iii) The first person or entity, whether an importer or a distributor, that owned the product or equipment in the United States.
- (d) This section in no way limits the liability of any manufacturer as defined in WAC 173-443-030 associated with a product or equipment from enforcement under chapter 70A.15 RCW.

~~(6)(7)~~ ~~WAC 173-443-090~~ Initial notification.

- (a) By December 31, 2019, a manufacturer or its representative must provide ecology an initial status notification of the status of all products and equipment within each applicable end-use that contains ~~uses~~ or ~~will-uses~~ HFCs or other substitutes prohibited in WAC 173-443-040, Table 1.
- (b) An initial status notification must include all covered products and equipment that the manufacturer offers for sale, leases, rents, installs, or otherwise causes to enter into Washington commerce.
- (c) A manufacturer must submit an initial status notification using ecology's notification form. The current form is available on ecology's website. This initial status notification must provide:
 - (i) Contact information on the manufacturer.
 - (ii) The name of the party authorized to represent the manufacturer for purposes of providing initial status notifications and status updates.
 - (iii) All products and equipment within an end-use that are applicable to the manufacturer.
 - (iv) Which HFCs or other prohibited substitutes are being used by products or equipment within each applicable end-use.
 - (v) Signature and certification by the authorized representative for the manufacturer.

~~(7)(8)~~ ~~WAC 173-443-100~~ Status update notification.

- (a) Within one hundred twenty days after the date of a prohibition in WAC 173-443-040, a manufacturer affected by the prohibition or its representative must provide ecology with an updated status notification using ecology's form. This updated status notification must include:
 - (i) Whether the manufacturer has ceased the use of HFCs or other substitutes prohibited in WAC 173-443-040 within each applicable end-use.
 - (ii) What, if any, HFCs or other prohibited substitutes remain in use.

- (iii) Updated responses on all information requested in the initial status notification required in WAC 173-443-060(7).

WAC 173-443-065 Requirements applicable to stationary refrigeration end-uses listed in WAC 173-443-040, Table 2.

- (1) Prohibitions. No person shall offer for sale, lease, rent, install, or other entry into Washington commerce any refrigeration equipment manufactured after the effective date that does not comply with the requirements of WAC-443-040, Table 2, unless an exemption is provided for in WAC 173-443-050.
- (2) Product labeling and disclosure. As of the effective date of this chapter, a manufacturer of any refrigeration equipment listed in WAC 173-443-040, Table 2, intended for sale or other entry into Washington commerce, must disclose the refrigerants contained or used in its equipment. The disclosure must be in the form of an on-product label that displays the following information:
 - (a) The type of refrigerant;
 - (b) Where available, the refrigerant charge size in either ounces, pounds, or kilograms;
 - (c) The date of manufacture; and
 - (d) Existing labels meeting the above requirements may be used.
- (3) Record keeping. As of the effective date of this chapter, a manufacturer of any refrigeration equipment listed in WAC 173-443-040, Table 2, must maintain for a minimum of five years, and make available upon request by ecology, a copy of the following records:
 - (a) Name and address of the person purchasing the equipment;
 - (b) Telephone number and email address of the person purchasing the equipment, if provided to the manufacturer;
 - (c) Model and serial number of the equipment;
 - (d) Date of manufacturer of the equipment;
 - (e) Refrigerant type the equipment is designed to use; and
 - (f) Refrigerant and full capacity of the equipment, where available.

WAC 173-443-070 Requirements applicable to stationary air conditioning end-uses listed in WAC 173-443-040, Table 3.

- (1) Prohibitions. No person shall offer for sale, lease, rent, install, or other entry into Washington commerce any air conditioning equipment manufactured after the effective date that does not comply with the requirements of WAC-443-040, Table 3, unless an exemption is provided for in WAC 173-443-050.
- (2) Product labeling and disclosure. As of the effective date of this chapter, a manufacturer of any air conditioning equipment listed in WAC 173-443-040, Table 3, intended for sale or other entry into Washington commerce, must disclose the refrigerants contained or used in its equipment. The disclosure must be in the form of an on-product label that displays the following information:

 - (a) The type of refrigerant;
 - (b) Where available, the refrigerant charge size in either ounces, pounds, or kilograms;
 - (c) The date of manufacture; and
 - (d) Existing labels meeting the above requirements may be used.
- (3) Record keeping. As of the effective date of this chapter, a manufacturer of any air conditioning equipment listed in WAC 173-443-040, Table 3, must maintain for a minimum of five years, and make available upon request by ecology, a copy of the following records:

 - (a) Name and address of the person purchasing the equipment;
 - (b) Telephone number and email address of the person purchasing the equipment, if provided to the manufacturer;
 - (c) Model and serial number of the equipment;
 - (d) Date of manufacture of the equipment;
 - (e) Date of sale of the equipment;
 - (f) Refrigerant type the equipment is designed to use; and
 - ~~(a)~~(g) Refrigerant and full capacity of the equipment, where available.

WAC 173-443-075 Requirements applicable to chillers used for industrial process refrigeration or cooling end uses listed in WAC 173-443-040, Table 4.

- (1) Prohibitions. No person shall sell, offer for sale, or purchase any chiller used for industrial process refrigeration or cooling after the effective date that does not comply with the requirements of WAC 173-443-040, Table 4, unless an exemption is provided for in WAC 173-443-050.

(2) Product labeling and disclosure. As of the effective date of this chapter, a manufacturer of any chiller listed in WAC 173-443-040, Table 4, intended for sale or other entry into Washington commerce, must disclose the refrigerants contained or used in its equipment. The disclosure must be in the form of an on-product label that displays the following information:

- (a) The type of refrigerant;
- (b) Where available, the refrigerant charge size in either ounces, pounds, or kilograms;
- (c) The date of manufacture; and
- (d) Existing labels meeting the above requirements may be used.

(3) Record keeping. As of the effective date of this chapter, a manufacturer of any chiller listed in WAC 173-443-040, Table 4, must maintain for a minimum of five years, and make available upon request by ecology, a copy of the following records:

- (a) Name and address of the person purchasing the equipment;
- (b) Telephone number and email address of the person purchasing the equipment, if provided to the manufacturer;
- (c) Model and serial number of the equipment;
- (d) Date of manufacture of the equipment;
- (e) Refrigerant type the equipment is designed to use; and
- (f) Refrigerant and full capacity of the equipment, where available.

WAC 173-443-080- Requirements applicable to small containers of automotive refrigerant and nonessential consumer products end uses listed in WAC 173-443-040, Table 5.

(1) Prohibitions. No person shall sell, offer for sale, or purchase any product after the effective date that does not comply with the requirements of WAC 173-443-040, Table 5, unless an exemption of provided for in WAC 173-443-050.

WAC 173-443-085 Petition for variance.

(1) An applicant may submit a request to the ecology HFC program for a variance from the requirements of WAC 173-443-040, Table 2, Table 3, or Table 4. Ecology may grant a variance if it determines that the request meets the conditions identified in subsection (2) of this section and the applicant has complied with all requirements identified in

subsection (3) this section.

(2) Types of variances. Ecology may grant a variance for any of the following:

(a) Impossibility. The applicant cannot comply with the requirements, and the applicant can demonstrate all of the following:

(i) A lower risk substitute is not currently or potentially available;

(ii) A variance will not increase the overall risk to human health or the environment; and

(iii) The applicant has made a good faith effort to anticipate and address any potential noncompliance.

(b) Force Majeure. The applicant cannot comply with the requirements, and the applicant can demonstrate all of the following:

(i) Noncompliance is due to a force majeure event; and

(ii) The applicant has made a good faith effort to anticipate and address any force majeure event.

(3) Application process. To apply for a variance, the applicant must submit an application that addresses (a) through (k) of this subsection:

(a) Applicant name, ownership status, address, telephone number, and email address;

(b) Description of business activity or product description;

(c) Relationship to the product;

(d) The specific section(s) for which a variance is requested;

(e) An explanation and description of the reasons for seeking a variance;

(f) Evidence demonstrating how the variance request meets the criteria identified in (2)(a) or (2)(b) of this section;

(g) Length of variance requested and the earliest date when compliance will be achieved;

(h) A description of the damage or harm that will result from having to comply with the requirements within the required timeframe;

(i) A compliance plan describing in detail how, if a variance is granted, compliance will be achieved as soon as possible, including all of the following:

(i) The method by which compliance will be achieved;

- (ii) Milestone achievements; and
- (iii) Milestone dates.
- (j) A mitigation plan to demonstrate how the applicant will reduce greenhouse gas emissions equal to or greater than would be emitted from granting the variant. The mitigation plan must include all calculations used to determine emissions estimates.
- (k) The application may be submitted in writing to either of the following addresses:
 - Ecology Air Quality Program
 - Attention: HFC Unit Supervisor
 - PO Box 47600
 - Olympia, WA 98504-7600; or

 - By email to:
 - HFC@ecology.wa.gov
 - Attention: HFC Unit Supervisor

(+)(4) Approval and disapproval process.

- (a) Ecology will determine whether the application is complete and will notify the applicant within thirty (30) days of receipt of the application. Only complete applications will be considered.
- (b) Within forty five days of determining that the application is complete, ecology will post a notice of the variance application on ecology's HFC webpage and ecology's public events and input webpage; and, will invite the public to comment on the application for thirty (30) days from the date information about the application is posted.
- (c) When making a decision on the application, ecology will consider all comments submitted during the public comment period.
- (d) Ecology will approve or disapprove the variance application within sixty (60) days after close of the public comment period.
- (e) Ecology will notify the applicant of the decision in writing, and if approved, will specify the terms and conditions of the variance in a letter to the applicant.
- (f) Ecology will grant a variance only to the applicant, and the variance is nontransferable.
- (g) Ecology will not approve a variance retroactively to any date prior to receipt of the application.

(h) Ecology may expeditiously approve a variance application prior to the close of the public comment period for a force majeure event meeting the criteria identified in (2)(b) of this section.

(5) Failure to comply with the terms of an approved variance.

(a) An applicant must comply with the terms of an approved variance in order to maintain its approved status.

(b) Ecology may revoke or modify the variance approval if it determines that an applicant no longer meets the criteria specified in the variance approval letter.

(a)(c) An applicant adversely affected by an ecology decision to revoke or modify an approved variance may seek review of ecology's decision by the pollution control hearings board in accordance with chapter 43.21B RCW and chapter 371-08 WAC.

WAC 173-443-090 Service and repair of equipment.

(1) A person who services, repairs, or disposes of a motor vehicle air conditioning system, commercial or industrial air conditioning, heating, or refrigeration system, or consumer appliance identified in WAC 173-443-040 must use refrigeration extraction equipment that meets the requirements of 40 CFR 82.158 to recover refrigerants that would otherwise be released into the atmosphere.

WAC 173-443-100 through XXX Refrigerant management program.

[Placeholder]

WAC 173-443-XXX Enforcement.

[Placeholder]

WAC 173-443-~~110~~-XXX Severability. If any provision of this chapter or its application is held invalid, the remainder of the chapter or application of the provision is not affected.