
Environment & Energy Committee

HB 1050

Brief Description: Reducing greenhouse gas emissions from fluorinated gases.

Sponsors: Representatives Fitzgibbon, Ortiz-Self, Leavitt, Duerr, Chopp, Ramel, Peterson, Goodman, Ryu, Callan, Ramos, Ormsby, Pollet, Stonier, Fey, Macri and Bergquist.

Brief Summary of Bill

- Establishes a maximum global warming potential threshold for hydrofluorocarbons (HFCs) used in stationary air conditioning, stationary refrigeration, and ice rinks.
- Applies certain existing regulations addressing emissions of ozone-depleting substances to HFCs.
- Directs the Department of Ecology (Ecology) to establish a refrigerant management program to address refrigerant emissions from large air conditioning and refrigeration systems.
- Requires Ecology to provide recommendations to the Legislature by December 1, 2021, regarding the design of a program to address the end-of-life management and disposal of refrigerants.
- Establishes a state purchasing and procurement preference for recycled refrigerants.
- Requires consideration of HFC emissions in mandatory utility conservation activities and in codes adopted by the State Building Code Council.

Hearing Date: 1/15/21

Staff: Jacob Lipson (786-7196).

This analysis was prepared by non-partisan legislative staff for the use of legislative members in their deliberations. This analysis is not part of the legislation nor does it constitute a statement of legislative intent.

Background:

Ozone-Depleting Substances and Hydrofluorocarbons.

Hydrofluorocarbons (HFCs) are a category of gases used primarily as refrigerants in a variety of commercial and industrial applications. HFCs are among the greenhouse gases (GHGs) identified by the United States Environmental Protection Agency (EPA) and the Department of Ecology (Ecology) as a result of their capacity to trap heat in the Earth's atmosphere. According to the EPA, the global warming potential (GWP) of HFCs and other GHGs is measured as a function of how much of the gas is concentrated in the atmosphere, how long the gas stays in the atmosphere, and how strongly the particular gas affects global atmospheric temperatures. Under state law, the GWP of GHGs are measured in terms of their equivalence to the emission of an identical volume of carbon dioxide over a 100-year timeframe (carbon dioxide equivalent or CO₂e). In rules adopted by Ecology for purposes of measuring GHG emissions, the GWP of HFCs ranges from 12 to 14,800.

In 1987, the United States and other members of the United Nations committed, in an agreement known as the Montreal Protocol, to phase out the use of certain ozone-depleting substances (ODSs). The United States Congress subsequently amended the federal Clean Air Act in 1990 to provide authority to the EPA to restrict the use of ODSs and to require manufacturers to use HFCs or other non-ODS substitutes.

In 1994, the EPA promulgated regulations authorizing the use of certain HFCs as a substitute for ODSs in specified products. However, in 2015 the EPA promulgated new regulations that entirely prohibited certain HFCs and other ODS substitutes or restricted their use to specified circumstances. Products and uses covered by the HFC restrictions in the EPA's 2015 regulations include aerosol propellants, motor vehicle air conditioning systems, retail food refrigeration and vending machines, and foams. In August 2017, the District of Columbia Circuit Court of Appeals vacated the portion of the EPA's 2015 regulations that applied to HFCs on the basis that the EPA had exceeded the federal statutory authority granted to it in 1990 to regulate substitutes of ODSs.

In addition to federal Clean Air Act restrictions, since 1991, the state Clean Air Act has also restricted ODSs in a number of ways:

- Persons that repair or dispose of certain equipment containing ODS refrigerants must use refrigerant extraction equipment to recover unused refrigerants that would otherwise be released into the atmosphere. This restriction does not apply to off-road commercial equipment.
- It is prohibited to willfully release ODS refrigerants from industrial, commercial, or motor vehicle air conditioning, commercial or industrial heating or refrigeration systems, and consumer appliances.
- It is prohibited to sell or purchase ODS refrigerants in containers designed for consumer recharge of motor vehicle air conditioning systems or consumer appliances. The restriction does not apply to ODS refrigerants purchased for certain off-road commercial

or agricultural equipment.

- If alternatives are available, it is prohibited to sell or purchase nonessential consumer products, such as party streamers, tire inflators, air horns, noise makers, and cleaning sprays, that contain ODSs.

Ecology was directed to adopt rules to implement these ODS restrictions, including enforcement procedures and rules that establish minimum performance specifications for refrigerant extraction equipment. However, Ecology's enforcement procedures may not include penalties or fines in areas where equipment to collect or recycle regulated refrigerants is not readily available.

Restrictions in State Law on Hydrofluorocarbons and other Ozone-Depleting Substance Substitutes.

In 2019, the Legislature enacted restrictions in state law applicable to the HFCs and ODS substitutes that were specified in the court-vacated 2015 EPA regulations, with the exception of restrictions in the EPA regulations on motor vehicle air conditioning. Under this law, persons may not sell, install, offer for lease, rent, or otherwise cause restricted equipment or products to enter commerce in Washington. Effective dates of between 2020 and 2024 were established for each of the types of products covered by the court-vacated EPA regulations:

- January 1, 2020, for propellants, foam blowing agents such as polyurethane or spray foam, and supermarket systems, stand-alone systems, remote condensing units, and vending machines;
- January 1, 2021, for refrigerated food processing and dispensing equipment, compact residential consumer refrigeration products, polystyrene extruded boardstock and billet, and rigid polyurethane low-pressure two-component spray foam;
- January 1, 2022, for residential consumer refrigeration products, except compact and built-in residential consumer refrigeration products;
- January 1, 2023, for built-in consumer refrigeration products and cold storage warehouses; and
- January 1, 2024, for centrifugal chillers and positive displacement chillers.

For any restricted uses covered in the 2015 EPA regulation but not covered by the above list, the effective date of the restrictions is January 1, 2020, or the effective date of the EPA regulation, whichever comes later. The restrictions do not apply to products manufactured prior to the effective date of a restriction, except that when products or equipment are retrofit from using one refrigerant to another, the product or equipment may not use a restricted HFC. Manufacturers of products that contain or use ODS substitutes must disclose the use of the ODS substitutes in the form of:

- A label on the product or equipment that meets requirements established by Ecology by rule. Ecology must recognize existing labeling requirements to the extent feasible, must consider labeling requirements of other state building codes and other safety standards, and may not require labeling of aircraft or aircraft components; and
- Submitting information to Ecology about the use of ODS substitutes by December 2019,

within 120 days of a restriction taking effect, and within 120 days of new products or equipment being introduced that are of a product class that use HFCs.

For restrictions in the EPA regulation on motor vehicle air conditioning, Ecology may adopt rules restricting the uses addressed by the EPA regulation within 12 months of another state's enactment or adoption of such restrictions. Ecology is also required to expeditiously propose a draft rule to conform with any future EPA approval of certain previously prohibited HFC blends for foam blowing and spray foam.

Ecology was directed to adopt rules to implement the 2019 HFC restrictions. In adopting rules Ecology was required to be consistent with or the same as the regulations adopted by the federal government or with other states that have adopted restrictions on HFCs and other ODS substitutes. Ecology was authorized in adopting rules to:

- modify the effective date of prohibitions for specific products or equipment if it determines that doing so reduces overall risk to human health and the environment and reflects the earliest date that an ODS substitute is available;
- prohibit ODS substitutes if the prohibition reduces overall risk to human health and the environment and lower-risk ODS substitutes are available; and
- add or remove ODS substitutes, use conditions, or use limits on approved substitutes, provided that doing so reduces overall risk to human health and the environment.

In 2020, Ecology finalized the adoption of rules to implement the 2019 legislation. In the 2020 HFC rule, Ecology modified the effective date of restrictions on HFCs in vending machines that had been established in the 2019 legislation.

As part of the same 2019 legislation that established these restrictions on HFCs, Ecology was directed to complete a study and submit a report to the Legislature on HFCs, including recommendations for eliminating legacy uses of HFCs subject to the new restrictions in state law and of HFCs that are not subject to the new restrictions in state law.

Recent Federal and Other State Actions to Address Hydrofluorocarbon and Refrigerant Emissions.

In December 2020, the United States Congress enacted The American Innovation and Manufacturing Act of 2020 (AIM Act) establishing federal restrictions on HFCs. The AIM Act establishes a phase-down of the production and consumption of HFCs in the United States to 15 percent of baseline levels by 2036. In order to produce or consume regulated HFCs, persons must hold tradeable allowances that are to be assigned in an allocation process specified under EPA regulations to be finalized in 2021.

The AIM Act also authorizes the EPA to establish rules to restrict the use of HFCs in specific sectors or subsectors. States are preempted for five years under the AIM Act from regulating the use of HFCs in metered-dose inhalers, defense sprays, certain polyurethane foams for marine and trailer uses, certain semiconductor manufacturing, mission-critical military uses, and in onboard

aerospace fire suppression.

A number of states have enacted restrictions on uses of HFCs that are similar to those enacted in Washington in 2019. In addition, the state of California, regulating through the California Air Resources Board (CARB), has implemented other programs to reduce HFC emissions, including the establishment of a refrigerant management program intended to reduce leaks from certain stationary refrigeration and air conditioning systems, and a deposit-return program applicable to small cannisters of HFC refrigerants used in motor vehicle air conditioning. In December 2020, the CARB also adopted rules that establish a maximum GWP for new stationary air conditioning, new stationary refrigeration equipment, and new ice rinks, among other HFC emission reduction measures.

State Clean Air Act: General.

Ecology and seven local air pollution control authorities have each received approval from the EPA to administer aspects of the federal Clean Air Act in Washington. The Air Pollution Control Account is used to fund Ecology's responsibilities in developing and implementing the state Clean Air Act. Violators of state Clean Air Act requirements are subject to criminal and civil penalties. Civil penalties of up to \$10,000 per violation are authorized by the state Clean Air Act.

Energy Conservation Requirements Applicable to Certain Utilities.

The Energy Independence Act (EIA) was approved by voters in 2006. The EIA requires an electric utility with more than 25,000 customers to meet targets for energy conservation and to meet a certain percent of its annual load with eligible renewable resources. These utilities must pursue all available conservation that is cost-effective, reliable, and feasible. Every two years, the qualifying utility must review and update an assessment of its achievable cost-effective conservation potential for the subsequent 10-year period.

Building Efficiency Incentive Program.

In 2019, the Department of Commerce was directed to establish a State Energy Performance Standard Early Adoption Incentive Program. Eligible building owners may submit applications to the Department for incentive payments, which are to be based on early compliance with applicable energy use targets that begin to become a mandatory compliance standard as early as 2026. Beginning September 30, 2025, the Department of Commerce must report to the Legislature on the results of the incentive program and provide recommendations for improving the effectiveness of the program.

State Purchasing and Procurement Policies.

The Department of Enterprise Services (DES) is responsible for providing products and services to support state agencies and sets policies and procedures for the state's purchases. State

agencies covered by the DES's procurement policies include all executive and judicial branches of state government including: offices; divisions; boards; commissions; higher education institutions; and correctional and other institutions. The DES may enter into agreements with other state agencies that delegate certain authority to those agencies to purchase their own goods and services.

State law establishes certain preferences for the procurement of goods or services that meet a variety of criteria. In 2019, the Legislature directed DES to establish a purchasing and procurement policy favoring HFC-free products, or products that use ODS substitutes with comparatively low GWPs.

State Building Code Council.

The State Building Code Council (SBCC) is a state agency that adopts and triennially updates the State Building Code (Code). The Code adopted by the SBCC establishes the minimum building, mechanical, fire, plumbing, and energy code requirements applicable to the construction of buildings. In 2019, the Legislature directed the SBCC to adopt rules that permit the use of allowed ODS substitutes and that do not require the use of the newly restricted ODS substitutes.

Summary of Bill:

Application to Hydrofluorocarbons of Clean Air Act Provisions Addressing Ozone-Depleting Substances.

The following provisions of the state Clean Air Act that currently apply to ozone-depleting substances (ODSs) are also applied to hydrofluorocarbons (HFCs):

- The requirement that repair or disposal services of refrigeration equipment use refrigerant extraction equipment to recover unused refrigerants. This requirement is also newly applied to off-road commercial equipment for both ODSs and HFCs;
- The requirement that the Department of Ecology (Ecology) provide assistance and information to persons interested in collecting, transporting, or recycling refrigerants;
- The prohibition on the willful release of refrigerants from air conditioning, heating and refrigeration systems, and consumer appliances;
- The prohibition on non-essential uses of refrigerants;
- The prohibition on the sale of regulated refrigerants in containers designed for self-charge of a motor vehicle air conditioning system or consumer appliance. This prohibition is also expanded to apply to off-road commercial and agricultural equipment for both ODS and HFCs; and
- The scope of Ecology rulemaking authority applicable to the above requirements is expanded to address HFCs in addition to ODSs, and must include procedures under which owners or operators of stationary refrigeration equipment and air conditioning equipment must provide Ecology with information related to their use of refrigerants.

Ecology is no longer prohibited, in enforcing refrigerant restrictions, from imposing penalties or fines in areas where equipment to collect or recycle refrigerants is not easily available.

Changes to Restrictions on Hydrofluorocarbons and Ozone-Depleting Substance Substitutes.

The following changes are made to statutory restrictions on HFCs in certain specified uses covered by legislation enacted in 2019:

- The statutory effective date of restrictions on high global warming potential (GWP) HFCs for use in vending machines is delayed until January 1, 2022, in alignment with the Ecology rules adopted to implement the 2019 legislation.
- Ecology is no longer required to propose a draft rule to conform with any Environmental Protection Agency (EPA) approval of certain previously prohibited HFC blends for foam blowing and spray foam.
- The disclosure requirements for restricted HFCs are modified to allow for the labeling disclosure of the compliance status of regulated products or equipment, instead of requiring a label that discloses the specific HFCs used in the product. Ecology may also require alternative disclosure requirements if the inclusion of a label denoting the use of a specific HFC or the compliance status of the product is not feasible.

Ecology is given authority or direction to adopt the following additional restrictions on HFCs in specific end-uses:

- Ecology must prohibit the use in ice rinks of ODS substitutes that have a GWP of at least 750 in new equipment manufactured beginning January 1, 2022.
- Ecology may prohibit the use of ODS substitutes that have a GWP of at least 300 in stationary refrigeration equipment manufactured beginning January 1, 2025, but only if the State Building Code Council (SBCC) adopts three specified engineering standards into state building codes by January 1, 2023. If the SBCC adopts the three specified engineering standards into state building codes after January 1, 2023, the restrictions on stationary refrigeration equipment may begin no earlier than 24 months after the adoption of the standards.
- Ecology may prohibit the use of ODS substitutes with a GWP of at least 750 in stationary air conditioning other than residential air conditioning. These standards may apply beginning January 1, 2023, for room air conditioners and dehumidifiers, and January 1, 2026, for systems with variable refrigerant flow or volume. For other types of stationary air conditioning equipment, restrictions may apply beginning January 1, 2025, but only if the SBCC adopts four specified engineering standards into state building codes before January 1, 2023.

In adopting rules to establish these new restrictions on HFCs in specific end-uses, Ecology may establish reporting, labeling, and recordkeeping requirements, as well rules to grant variances from restrictions. To the extent practicable, rules must be harmonized with similar requirements established by Ecology for a refrigerant management program and must be consistent with similar programs adopted in other states.

Refrigerant Management Program.

Ecology is directed to adopt rules to establish a refrigerant management program (RMP) to reduce emissions of refrigerants, including ODSs and HFCs, from activities and equipment responsible for significant emission volumes. The program must include larger stationary refrigeration systems and larger commercial air conditioning systems.

In establishing the program, Ecology must:

- exempt equipment operations associated with de minimis emissions or that have a de minimis charging capacity of 50 pounds;
- exempt all non-ODS refrigerants with a GWP of less than 150;
- require registration of stationary refrigeration and air conditioning systems larger than de minimis thresholds;
- require refrigeration and air conditioning system owners or operators to conduct periodic leak-detection inspections and to inspect for leaks each time significant refrigerant amounts are added to the system;
- require leaking refrigeration or air conditioning systems to be repaired within specified amounts of time;
- require the retrofit, replacement, or retirement of leaking systems incapable of repair;
- establish annual reporting requirements and record retention requirements; and
- apply leak rates and regulatory thresholds that achieve greater emission reductions than federal regulations and that reflect levels of achievable superior performance.

In establishing the program, Ecology may:

- scale program requirements based on equipment, facility, or operator size;
- establish delayed effective dates for persons and systems with lower refrigerant emissions;
- phase in program registration requirements;
- require leak-detection inspections to occur more frequently for larger refrigeration and air conditioning systems;
- exempt refrigeration systems with low-GWP refrigerants or with automatic leak detection systems from leak detection inspection requirements;
- establish service practices for refrigeration and air conditioning systems; and
- establish exemption application processes that authorize Ecology to grant exemptions on the basis of economic hardship, natural disaster, or after considering lifecycle greenhouse gas (GHG) emissions associated with unrepaired leaks.

Owners or operators of refrigeration and air conditioning systems in the RMP must provide leak rate documentation to prospective purchasers of the system.

Ecology may collect annual fees from air conditioning and refrigeration system operators regulated in the RMP. A refrigerant emission management account (Account) is created for the deposit of fees imposed under the RMP.

Other Provisions Addressing Hydrofluorocarbons and Refrigerant Emissions.

In assessing the energy conservation that electric utilities must pursue under the 2006 Energy Independence Act, qualifying utilities must consider the non-energy impacts associated with the generation of electricity and from other sources, including refrigerants.

In the Department of Commerce's September 2025 report to the Legislature related to the implementation of the State Energy Performance Standard Early Adoption Incentive Program, the Department must provide recommendations for aligning the incentive program with a goal of reducing GHG emissions from substitutes for ODSs.

The Department of Enterprise Services must establish a purchasing and procurement policy that provides a preference, in serving existing equipment, for reclaimed refrigerants that meet minimum quality standards established by the EPA.

The State Building Code Council (SBCC) must adopt rules that allow the use of substitutes with lower GWPs than alternative substances to the maximum extent practicable. The SBCC must also allow the use of substitutes in all instances in which substitutes have been approved for use by the EPA. The SBCC rules that affect the design or installation of refrigeration or air conditioning equipment must be consistent with a goal of minimizing system leakage of refrigerants.

By December 1, 2021, Ecology must provide recommendations to the Legislature for the design of a program to address end-of-life management and disposal of refrigerants. The Department must solicit feedback from potentially impacted parties and the public in developing the recommendations. The recommendations must include specific design considerations regarding:

- the legal and financial obligations applicable to refrigerant manufacturers, importers, distributors, and retailers, and for owners, operators, and service technicians of refrigerant-using equipment;
- a funding mechanism for the program that will provide a financial incentive for the recovery of refrigerants; and
- performance goals and operational standards for program activities.

Violations of restrictions on refrigerants are subject to penalties authorized under the Clean Air Act, and must be deposited in the Account.

Appropriation: None.

Fiscal Note: Available.

Effective Date: The bill takes effect 90 days after adjournment of the session in which the bill is passed.