129th MAINE LEGISLATURE

SECOND REGULAR SESSION-2020

Legislative Document No. 2112

H.P. 1505  House of Representatives, February 20, 2020

An Act To Limit the Use of Hydrofluorocarbons To Fight Climate Change

Reference to the Committee on Environment and Natural Resources suggested and ordered printed.

ROBERT B. HUNT
Clerk

Presented by Representative TUCKER of Brunswick. (GOVERNOR'S BILL)
Cosponsored by Senator FOLEY of York and
Representatives: BLUME of York, CAMPBELL of Orrington, Speaker GIDEON of Freeport,
HUBBELL of Bar Harbor, KESCHL of Belgrade, MARTIN of Eagle Lake, MOONEN of
Portland, Senator: VITELLI of Sagadahoc.
Be it enacted by the People of the State of Maine as follows:

Sec. 1. 38 MRSA §1612 is enacted to read:

§1612. Hydrofluorocarbon use restrictions

1. Definitions. As used in this section, unless the context otherwise indicates, the following terms have the following meanings.

A. "Substance" means any chemical or blend intended for an end use.

2. Prohibition. In order to reduce greenhouse gas emissions by substituting or reducing the use of the hydrofluorocarbons with the highest global warming potential, a person may not sell, lease, rent, install, use or enter into commerce in the State any product or equipment that uses or will use a substance that is a hydrofluorocarbon with high global warming potential intended for any air conditioning, refrigeration, foam or aerosol propellant end use as determined by the department in rules.

3. Rulemaking. The department shall adopt rules to implement this section. Rules adopted pursuant to this subsection are routine technical rules as defined in Title 5, chapter 375, subchapter 2-A.

Sec. 2. Rulemaking. The Department of Environmental Protection shall adopt rules to implement the Maine Revised Statutes, Title 38, section 1612 in accordance with this section. In adopting the initial rules pursuant to Title 38, section 1612, the department shall regulate each substance and end use as provided for in this section and may not regulate any substance or end use not addressed in this section. In the future, the department may adopt rules adding or removing substances from the list of prohibited substances or adding or removing end uses.

1. Definitions. As used in this section, unless the context otherwise indicates, the following terms have the following meanings.

A. "Aerosol propellant" means a compressed gas or vapor in a container that, upon release of pressure and expansion through a valve, carries another substance from the container as a mist or spray.

B. "Air conditioning equipment" means chillers intended for comfort cooling of occupied spaces.

C. "Built-in household refrigerators and freezers" means any refrigerator, refrigerator-freezer or freezer intended for residential use that has 7.75 cubic feet or greater total volume and 24 inches or less depth not including doors, handles and custom front panels; that has sides that are not finished and not designed to be visible after installation; that is designed, intended and marketed exclusively to be installed totally encased by cabinetry or panels that are attached during installation and securely fastened to adjacent cabinetry, walls or floor; and that is equipped with an integral factory-finished face or that accepts a custom front panel.

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

E. "Centrifugal chiller" means air conditioning equipment that uses a centrifugal
compressor in a vapor-compression refrigeration cycle. A centrifugal chiller is a
chiller intended for comfort cooling and does not include chillers used for industrial
process cooling and refrigeration.

F. "Cold storage warehouse" means a cooled facility designed to store meat, produce,
dairy products and other products prior to their delivery to other locations for sale to
the ultimate consumer.

G. "Compact household refrigerators and freezers" means any refrigerator,
refrigerator-freezer or freezer intended for residential use that has a total refrigerated
volume of less than 7.75 cubic feet.

H. "Component" means a part of a refrigeration system, including, but not limited to,
a condensing unit, compressor, condenser, evaporator and receiver, and all of the
system's connections and subassemblies without which the refrigeration system
would not properly function or would be subject to failure.

I. "Department" means the Department of Environmental Protection.

J. "End use" means processes or classes of specific applications within industry
sectors, including, but not limited to, those listed in subsection 2.

K. "Flexible polyurethane" means a nonrigid synthetic foam containing polymers of
urethane radicals, including, but not limited to, foam used in furniture, bedding, chair
cushions and shoe soles.

L. "Foam-blowing agent" or "foam" means a product or substance used to produce a
product with a cellular structure formed via a foaming process, including materials
that undergo hardening or phase transition, such as polymers and plastics.

M. "Heat pump" means a device used for comfort heating or cooling of residential
and commercial spaces, including, but not limited to, a mini-split heat pump. Heat
pumps may be air sourced, water sourced or ground sourced.

N. "Household refrigerators and freezers" means any refrigerator, refrigerator-
freezer, freezer or miscellaneous household refrigeration appliance intended for
residential use. "Household refrigerators and freezers" does not include compact
household refrigerators and freezers or built-in household refrigerators and freezers.

O. "Integral skin polyurethane" means a synthetic self-skinning foam containing
polymers of urethane radicals, including, but not limited to, foam used in shoe soles
and automobile steering wheels and dashboards.

P. "Light duty vehicle" means a car or light duty truck as defined in the Maine
Revised Statutes, Title 5, section 1812-E.

Q. "Metered dose inhaler" means a device that delivers a measured amount of
medication as a mist that a patient can inhale, typically used for bronchodilation to
treat symptoms of asthma, chronic obstructive pulmonary disease, chronic bronchitis,
emphysema and other respiratory illnesses, and consists of a pressurized canister of medication in a case with a mouthpiece.

R. "Miscellaneous residential refrigeration appliance" means a residential refrigeration appliance smaller than a refrigerator, refrigerator-freezer or freezer for use in a household and includes coolers, cooler compartments and combination cooler-refrigeration or cooler-freezer products.

S. "New" means, with regard to a product or equipment, a product or equipment that is manufactured after the effective date of this section or equipment substantially modified after the effective date of this section such that the capital cost of the modification exceeds 50% of the cost of replacing the whole system.

T. "Person" means an individual, firm, association, organization, manufacturer, distributor, partnership, business trust, corporation, limited liability company, company, state or local governmental agency or public district.

U. "Phenolic insulation board" means phenolic insulation, including, but not limited to, insulation used for roofing and walls.

V. "Phenolic insulation bunstock" means phenolic insulation that is a large solid box-like structure formed during the production of polystyrene insulation and that can be cut into specific custom lengths and shapes.

W. "Polyolefin" means foam sheets and tubes made of polyolefin.

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

Y. "Polystyrene extruded sheet" means polystyrene foam including foam used for packaging and buoyancy or flotation. "Polystyrene extruded sheet" includes foam made into food-service items, including hinged polystyrene containers, food trays, plates, bowls and retail egg containers.

Z. "Positive displacement chiller" means a vapor compression cycle chiller that uses a positive displacement compressor, typically used for commercial comfort air conditioning. "Positive displacement chiller" does not include a chiller used for industrial process cooling and refrigeration.

AA. "Refrigerant gas" or "refrigerant" means any substance, including blends and mixtures, that is used for heat transfer purposes.

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

CC. "Refrigeration equipment" means any stationary device that is designed to contain and use refrigerant gas to establish or maintain colder than ambient temperatures in a confined space, including, but not limited to, retail food
refrigeration equipment, household refrigerators and freezers and cold storage warehouses.

DD. "Remote condensing unit" means retail food refrigeration equipment that has a central condensing portion and may consist of one or more compressors, condensers and receivers assembled into a single unit, which may be located outside the sales area. "Remote condensing unit" includes units that are commonly installed in convenience stores, specialty shops such as bakeries or butcher shops, supermarkets, restaurants and other locations where food is stored, served or sold.

EE. "Residential use" means use by an individual of a substance, or a product containing the substance, in or around a permanent or temporary household, during recreation or for any personal use or enjoyment. "Residential use" does not include use within a household for commercial or medical applications or use in automobiles, watercraft or aircraft.

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

GG. "Retrofit" means to replace the refrigerant used in refrigeration equipment with a different refrigerant and includes related changes to the refrigeration equipment required to maintain its operation and reliability following refrigerant replacement.

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

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

JJ. "Rigid polyurethane high-pressure 2-component spray foam" means a foam product that is pressurized to 800 to 1,600 pounds per square inch during manufacture; is sold in pressurized containers as 2 parts; and is blown and applied in situ using high-pressure pumps to propel the foam, and may use liquid blowing agents without an additional propellant.

KK. "Rigid polyurethane in commercial refrigeration" means polyurethane insulation for pipes, walls and metal doors in retail food refrigeration equipment.

LL. "Rigid polyurethane low-pressure 2-component spray foam" means a foam product that is pressurized to less than 250 pounds per square inch during manufacture, sold in pressurized containers as 2 parts and typically applied in situ using a gaseous foam-blowing agent that also serves as a propellant so pumps typically are not needed.

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

NN. "Rigid polyurethane one-component foam sealant" means a foam packaged in aerosol cans that is applied in situ using a gaseous foam-blowing agent that is also the propellant.
OO. "Rigid polyurethane sandwich panels" means polyurethane insulation sandwiched between outer structural layers and used as insulation for walls and metal doors, including garage doors.

PP. "Rigid polyurethane slabstock" means a rigid closed-cell foam containing polymers of urethane radicals formed into slabstock insulation for panels and pipes.

QQ. "Stand-alone low-temperature unit" means a stand-alone unit that maintains food or beverages at temperatures at or below 32 degrees Fahrenheit.

RR. "Stand-alone medium-temperature unit" means a stand-alone unit that maintains food or beverages at temperatures above 32 degrees Fahrenheit.

SS. "Stand-alone unit" means a retail refrigerator, freezer and reach-in cooler, either open or with doors, for which all refrigeration components are integrated and the refrigeration circuit may be entirely brazed or welded. Stand-alone units are fully charged with refrigerant at the factory and typically require only an electricity supply to begin operation.

TT. "Substance" means any chemical or blend intended for an end use listed in subsection 2.

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

VV. "Use" with regard to any use of a compound or any substance, includes, but is not limited to, use in a manufacturing process or product in the State, consumption for an end use in the State and use in intermediate applications in the State, such as formulation or packaging for other subsequent applications, and excludes residential use, but does not exclude manufacturing for the purpose of residential use.

WW. "Vending machine" means self-contained retail food refrigeration equipment that dispenses goods that must be kept cold or frozen.

2. End use prohibitions. The rules must provide that a person may not sell, lease, rent, install, use or enter into commerce in the State any product or equipment that uses or will use a listed substance intended for any air conditioning, refrigeration, foam or aerosol propellant end use listed as prohibited in this subsection, unless an exemption is provided for that end use in subsection 3.

For the following end uses, the listed hydrofluorocarbon substances are prohibited as of the date indicated for each end use.

A. For aerosol propellants in new products, HFC-125, HFC-134a, HFC-227ea and blends of HFC-227ea and HFC-134a are prohibited as of January 1, 2021.

B. For new centrifugal chillers, 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-438A, R-507A, RS-44 (2003 composition) and THR-03 are prohibited as of January 1, 2024.

D. For light duty vehicles, HFC-134a, SP34E, R-426A and RS-24 (new formulation) are prohibited for all newly manufactured vehicles as of model year 2021.


M. For retrofitted stand-alone units, R-404A and R-507A are prohibited as of January 1, 2021.


Q. For retrofitted vending machines, R-404A and R-507A are prohibited as of January 1, 2021.


S. For new rigid polyurethane and polyisocyanurate laminated boardstock, HFC-134a, HFC-245fa, HFC-365mfc and any blends thereof are prohibited as of January 1, 2021.

T. For new flexible polyurethane, HFC-134a, HFC-245fa, HFC-365mfc and any blends thereof are prohibited as of January 1, 2021.

U. For new integral skin polyurethane, HFC-134a, HFC-245fa, HFC-365mfc and any blends thereof; Formacel TI; and Formacel Z-6 are prohibited as of January 1, 2021.

V. For new polystyrene extruded sheet, HFC-134a, HFC-245fa, HFC-365mfc and any blends thereof; Formacel TI; and Formacel Z-6 are prohibited as of January 1, 2021.

W. For new phenolic insulation board and new phenolic insulation bunstock, HFC-143a, HFC-134a, HFC-245fa, HFC-365mfc and any blends thereof are prohibited as of January 1, 2021.

X. For new rigid polyurethane slabstock and other new rigid polyurethane, HFC-134a, HFC-245fa, HFC-365mfc and any blends thereof; Formacel TI; and Formacel Z-6 are prohibited as of January 1, 2021.

Y. For new rigid polyurethane appliance foam, HFC-134a, HFC-245fa, HFC-365mfc and any blends thereof; Formacel TI; and Formacel Z-6 are prohibited as of January 1, 2021.
Z. For new rigid polyurethane in commercial refrigeration and new rigid polyurethane sandwich panels, HFC-134a, HFC-245fa, HFC-365mfc and any blends thereof; Formacel TI; and Formacel Z-6 are prohibited as of January 1, 2021.

AA. For new polyolefin, HFC-134a, HFC-245fa, HFC-365mfc and any blends thereof; Formacel TI; and Formacel Z-6 are prohibited as of January 1, 2021.

BB. For new rigid polyurethane marine flotation foam, HFC-134a, HFC-245fa, HFC-365mfc and any blends thereof; Formacel TI; and Formacel Z-6 are prohibited as of January 1, 2021.

CC. For new polystyrene extruded boardstock and billet, HFC-134a, HFC-245fa, HFC-365mfc and any blends thereof; Formacel TI; Formacel B; and Formacel Z-6 are prohibited as of January 1, 2021.

DD. For new rigid polyurethane high-pressure 2-component spray foam, HFC-134a, HFC-245fa and any blends thereof; blends of HFC-365mfc with at least 4% HFC-245fa; commercial blends of HFC-365mfc with 7% to 13% HFC-227ea and the remainder HFC-365mfc; and Formacel TI are prohibited as of January 1, 2021.

EE. For new rigid polyurethane low-pressure 2-component spray foam, HFC-134a, HFC-245fa and any blends thereof; blends of HFC-365mfc with at least 4% HFC-245fa; commercial blends of HFC-365mfc with 7% to 13% HFC-227ea and the remainder HFC-365mfc; and Formacel TI are prohibited as of January 1, 2021.

FF. For new rigid polyurethane one-component foam sealants, HFC-134a, HFC-245fa and any blends thereof; blends of HFC-365mfc with at least 4% HFC-245fa; commercial blends of HFC-365mfc with 7% to 13% HFC-227ea and the remainder HFC-365mfc; and Formacel TI are prohibited as of January 1, 2021.

3. Exemptions. The rules must include the following exemption provisions:

A. Heat pumps are exempt from end use prohibitions under this section; and

B. The following exemptions to the prohibitions in subsection 2 apply in the end use categories indicated.

   (1) HFC-134a is allowed as an aerosol propellant in new cleaning products for removal of grease, flux and other soils from electrical equipment; new refrigerant flushes; new products for sensitivity testing of smoke detectors; new lubricants and freeze sprays for electrical equipment or electronics; new sprays for aircraft maintenance; new sprays containing corrosion preventive compounds used in the maintenance of aircraft, electrical equipment, electronics or military equipment; new pesticides for use near electrical wires, in aircraft, in total release insecticide foggings or in certified organic use pesticides for which the federal Environmental Protection Agency has specifically disallowed all other lower global warming potential propellants; new mold release agents and mold cleaners; new lubricants and cleaners for spinnerets for synthetic fabrics; new duster sprays specifically for removal of dust from photographic negatives, semiconductor chips, specimens under electron microscopes and energized electrical equipment; new adhesives and sealants in canisters for commercial use; new document preservation sprays; new wound care sprays; new topical cooling sprays for pain
relief; and new products for removing bandage adhesives from skin. HFC-134a, HFC-227ea and blends of HFC-227ea and HFC-134a are allowed as aerosol propellants for new metered dose inhalers approved by the United States Department of Health and Human Services, Food and Drug Administration for medical purposes.

(2) HFC-134a is allowed as a new air conditioning refrigerant for military marine vessels when the department has determined that reasonable efforts have been made to ascertain that other alternatives are not technically feasible due to performance or safety requirements. HFC-134a and R-404A are allowed as new air conditioning refrigerants in spacecraft intended for human occupancy and related support equipment when the department has determined that reasonable efforts have been made to ascertain that other alternatives are not technically feasible due to performance or safety requirements.

(3) For all new foams other than rigid polyurethane one-component foam sealants, all substances listed in subsection 2 are allowed, until January 1, 2022, in military applications when the department has determined that reasonable efforts have been made to ascertain that other alternatives are not technically feasible due to performance or safety requirements; and, until January 1, 2025, in space-related and aeronautics-related applications when the department has determined that reasonable efforts have been made to ascertain that other alternatives are not technically feasible due to performance or safety requirements.

(4) For new rigid polyurethane 2-component spray foams, all substances listed in subsection 2 are allowed, until January 1, 2025, in military or space-related and aeronautics-related applications when the department has determined that reasonable efforts have been made to ascertain that other alternatives are not technically feasible due to performance or safety requirements.

4. Disclosure statements. The rules must require any person who manufactures, sells, leases, rents or enters into commerce in the State a product or equipment intended for air conditioning, refrigeration, foam or aerosol propellant end use, if the product or equipment uses or is intended to use any substance listed as prohibited for that end use in subsection 2, to provide a written disclosure to the buyer as part of the sales transaction and invoice.

A. The required written disclosure must state:

(1) For refrigeration equipment and air conditioning equipment: "This equipment is prohibited from use in Maine with any refrigerant on the list in Maine Department of Environmental Protection rules of prohibited substances for that specific end use. This disclosure statement has been reviewed and approved by [THE ENTITY], and [THE ENTITY] attests, under penalty of perjury, that these statements are true and accurate."

(2) For foam: "This foam system is prohibited from use in Maine with any foam-blowing agent on the list in Maine Department of Environmental Protection rules of prohibited substances for that specific end use. This disclosure statement has
(3) For aerosol propellants: "This product is prohibited from use in Maine with any aerosol propellant on the list in Maine Department of Environmental Protection rules of prohibited substances for that specific end use. This disclosure statement has been reviewed and approved by [THE ENTITY], and [THE ENTITY] attests, under penalty of perjury, that these statements are true and accurate."

B. At the point of sale, the disclosure statement requirement may be met alternatively with a label on the product or equipment reading: "Not for sale in Maine." The label must be displayed on the product or equipment so that it is readily observable without removing or disassembling any portion of the packaging. The label must be in a font size as large as or larger than the font size of all other words on the principal display panel, excluding the company name, brand name and logo.

C. The disclosure statement under paragraph A or label under paragraph B must remain with the product or equipment while it is in the State.

5. Record keeping. The rules must include a provision requiring any person who manufactures any product or equipment for the end uses listed in subsection 2 for sale or entry into commerce in the State to maintain for 5 years, and make available upon request by the department, records sufficient to demonstrate that the product or equipment does not contain any substances listed in subsection 2 as prohibited for that end use or that the product is exempt in accordance with subsection 3.

6. Venting prohibition. The rules must provide that a person maintaining, servicing, repairing or disposing of any product or equipment containing or using a substance intended for an end use listed in subsection 2 may not knowingly vent or otherwise release into the environment any substance contained or used in that product or equipment. De minimis releases associated with good faith attempts to recycle or recover such substances are not subject to this prohibition.

SUMMARY

This bill prohibits the selling, leasing, renting, installing, use or entering into commerce of any product or equipment that uses or will use a substance that is a hydrofluorocarbon with high global warming potential intended for any air conditioning, refrigeration, foam or aerosol propellant end use as determined by the Department of Environmental Protection in rules. It directs the department to adopt rules to implement the prohibition and specifies the substances and end uses that are to be addressed in the rules. In adopting the initial rules, the department must regulate each substance and end use as specifically provided for in the bill and may not regulate any substance or end use not addressed in the bill. In the future, the department may adopt rules adding or removing substances from the list of prohibited substances or adding or removing end uses.