
A BILL FOR AN ACT

RELATING TO HYDROFLUOROCARBONS.

BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF HAWAII:

1 SECTION 1. The legislature finds that hydrofluorocarbons,
2 or HFCs, are synthetic gases that pose a significant risk to our
3 environment and therefore should be phased out and replaced with
4 available alternatives that are safer and more cost-effective.
5 Hydrofluorocarbons are greenhouse gases that are hundreds to
6 thousands of times more potent than carbon dioxide in
7 contributing to climate change. If left unchecked,
8 hydrofluorocarbon emissions will increase to seven to nineteen
9 per cent of global greenhouse gas emissions by 2050.
10 Hydrofluorocarbons are widely used as cooling agents in air
11 conditioners and refrigerators and in aerosol propellants,
12 solvents, and foaming agents. These gases enter the environment
13 through the manufacture, leakage, and disposal of these
14 products.

15 Prior to the use of hydrofluorocarbons, chlorofluorocarbons
16 or CFCs, were used for these applications. Beginning in 1987,
17 chlorofluorocarbons were globally phased out by the Montreal



1 Protocol due to the role of these gases in ozone depletion.
2 Hawaii banned the sale and release of chlorofluorocarbons
3 through Act 77, Session Laws of Hawaii 1989; Act 316, Session
4 Laws of Hawaii 1990; and Act 264, Session Laws of Hawaii 1992;
5 however, hydrofluorocarbons were not included in these
6 prohibitions.

7 Now, following nearly three decades of widespread use,
8 there is an increased awareness of the significant impacts that
9 hydrofluorocarbons have on climate change. While
10 hydrofluorocarbons do not deplete ozone like
11 chlorofluorocarbons, they are long-lived and have more than a
12 thousand times more warming potential than carbon dioxide.
13 Given this understanding, there has been action nationally and
14 internationally to phase out the use of hydrofluorocarbons.
15 California, Vermont, and Washington have passed legislation to
16 replace hydrofluorocarbons with safer alternatives, and the
17 Kigali Amendment to the Montreal Protocol provides a framework
18 to transition from hydrofluorocarbons to substances having low
19 to zero global warming potential.

20 Given Hawaii's efforts to reduce greenhouse gas emissions
21 and mitigate the effects of climate change, the phase-out of



1 hydrofluorocarbons aligns with many existing goals and
2 priorities. This is especially important now because federal
3 action to address hydrofluorocarbons has stalled. Although the
4 United States Environmental Protection Agency, recognizing the
5 impacts of hydrofluorocarbons on climate change, previously
6 implemented a rule under the Clean Air Act that imposed stricter
7 requirements on hydrofluorocarbons emission monitoring and
8 disposal, the agency subsequently proposed a reversal of this
9 rule, thereby jeopardizing the increased regulation of
10 hydrofluorocarbons at the federal level.

11 In the absence of federal action, states must provide
12 leadership by addressing hydrofluorocarbons now because the
13 impacts of climate change will not wait for federal law to
14 regulate these harmful emissions. The legislature finds that
15 substituting or reducing the use of hydrofluorocarbons with the
16 highest global warming potential will provide a significant
17 boost to the State's efforts to reduce its greenhouse gas
18 emissions to established limits. The legislature also finds
19 that hydrofluorocarbons will be comparatively easy to reduce and
20 eliminate without widespread detriment to industry consumers.



1 While phasing out hydrofluorocarbons is essential to
2 reducing greenhouse gas emissions, disposal of
3 hydrofluorocarbons currently in use is also a necessary
4 consideration. Because the State does not regulate
5 hydrofluorocarbons in the same way that it regulates
6 chlorofluorocarbons, there are currently no standards addressing
7 the disposal of products containing hydrofluorocarbons.
8 However, hydrofluorocarbons are recyclable and it is estimated
9 that if thirty per cent of hydrofluorocarbons currently in use
10 globally were recycled, approximately eighteen billion metric
11 tons of carbon dioxide-equivalent emissions would be prevented
12 over the next twenty-five years.

13 The purpose of this Act is to:

- 14 (1) Preserve federal regulations on the use of
15 hydrofluorocarbons in state law;
- 16 (2) Establish a preference for products that do not
17 contain hydrofluorocarbons in the state procurement
18 code; and
- 19 (3) Direct the Hawaii state energy office and the
20 environmental management division of the department of
21 health to study how to increase the use of



1 refrigerants with low global warming potential and
2 recommend how to establish a state program that
3 supports the elimination of legacy uses of
4 hydrofluorocarbons.

5 SECTION 2. Chapter 342B, Hawaii Revised Statutes, is
6 amended by adding a new part to be appropriately designated and
7 to read as follows:

8 "PART . REGULATION OF HYDROFLUOROCARBONS

9 §342B-A Definitions. As used in this part, unless the
10 context otherwise requires:

11 "Class I substance" and "class II substance" mean those
12 substances listed in title 42 United States Code section 7671a,
13 as it read on November 15, 1990, and appendix A or B of subpart A
14 of title 40 Code of Federal Regulations part 82, as those read
15 on January 3, 2017.

16 "Hydrofluorocarbon" means a class of greenhouse gases that
17 are saturated organic compounds containing hydrogen, fluorine,
18 and carbon.

19 "Residential consumer refrigeration product" has the same
20 meaning as in section 430.2 of subpart A of title 10 Code of
21 Federal Regulations part 430.



1 "Retrofit" has the same meaning as in section 152 of
2 subpart F of 40 Code of Federal Regulations part 82, as that
3 section existed as of January 3, 2017.

4 "Substitute" means a chemical, product, or alternative
5 manufacturing process, whether new or retrofit, that is used to
6 perform a function previously performed by a class I substance or
7 class II substance and any substitute subsequently adopted to
8 perform that function, including hydrofluorocarbons, as set forth
9 in appendix U or V, subpart G of title 40 Code of Federal
10 Regulations part 82, as those read on January 3, 2017.

11 **§342B-B Regulation of hydrofluorocarbons.** (a) A person
12 may not offer any product or equipment for sale, lease, or rent,
13 or install or otherwise cause any equipment or product to enter
14 into commerce in the State if that equipment or product consists
15 of, uses, or will use a substitute for the applications or end
16 uses restricted by appendix U or V, as those read on January 3,
17 2017, and consistent with the dates established in subsection
18 (d).

19 (b) Except where existing equipment is retrofit, nothing
20 in this subsection requires a person that acquired a restricted
21 product or equipment prior to an effective date of the



1 restriction in subsection (d) to cease use of that product or
2 equipment.

3 (c) Products or equipment manufactured prior to an
4 applicable effective date of the restrictions in subsection (d)
5 may be sold, imported, exported, distributed, installed, and used
6 after the specified effective date.

7 (d) The restrictions under subsection (a) shall take effect
8 beginning:

9 (1) January 1, 2021, for:

10 (A) Propellants;

11 (B) Rigid polyurethane applications and spray foam,
12 flexible polyurethane, integral skin

13 polyurethane, flexible polyurethane foam,

14 polystyrene extruded sheet, polyolefin, phenolic
15 insulation board and bunstock; and

16 (C) Supermarket systems, remote condensing units, and
17 stand-alone units;

18 (2) January 1, 2022, for:

19 (A) Refrigerated food processing and dispensing
20 equipment;



- 1 (B) Compact residential consumer refrigeration
- 2 products;
- 3 (C) Polystyrene extruded boardstock and billet, and
- 4 rigid polyurethane low-pressure two component-
- 5 spray foam; and
- 6 (D) Vending machines;
- 7 (3) January 1, 2023, for residential consumer
- 8 refrigeration products other than compact and built-in
- 9 residential consumer refrigeration products;
- 10 (4) January 1, 2023, for cold storage warehouses;
- 11 (5) January 1, 2024, for built-in residential consumer
- 12 refrigeration products, centrifugal chillers, and
- 13 positive displacement chillers; and
- 14 (6) On either July 1, 2022, or the effective date of the
- 15 restrictions identified in appendix U or V, subpart G
- 16 of title 40 Code of Federal Regulations part 82, as
- 17 those read on January 3, 2017, whichever comes later,
- 18 for all other applications and end uses for substitutes
- 19 not covered by the categories listed in paragraphs (1)
- 20 through (5).

1 (e) The department may adopt rules that include any of the
2 following:

3 (1) The modification of the date of a prohibition
4 established pursuant to subsection (d) if the director
5 determines that the modified deadline meets both of the
6 following criteria:

7 (A) Reduces the overall risk to human health or the
8 environment; and

9 (B) Reflects the earliest date that a substitute is
10 currently or potentially available;

11 (2) The prohibition on the use of any substitute if the
12 department determines that the prohibition meets both
13 of the following criteria:

14 (A) Reduces the overall risk to human health or the
15 environment; and

16 (B) A lower-risk substitute is currently or
17 potentially available;

18 (3) The creation of a list of approved substitutes, use
19 conditions, or use limits, if any, and the addition or
20 removal of substitutes, use conditions, or use limits
21 to or from the list of approved substitutes if the



1 diretor determines those substitutes reduce the overall
2 risk to human health and the environment; and

3 (4) The creation of a list of exemptions from this section
4 for medical uses of hydrofluorocarbons.

5 (f) If the United States Environmental Protection Agency
6 approves a previously prohibited hydrofluorocarbon blend with a
7 global warming potential of seven hundred fifty or less for foam
8 blowing of polystyrene extruded boardstock and billet and rigid
9 polyurethane low-pressure two-component spray foam pursuant to
10 the Significant New Alternatives Policy Program under section
11 7671(k) of the federal Clean Air Act, title 42 United States
12 Code, section 7401 et seq., the director shall expeditiously
13 propose a rule to conform to the requirements established under
14 this section with that federal action.

15 **§342B-C Aircraft maintenance; definition.** For the
16 purposes of implementing the restrictions specified in
17 appendix U of subpart G of title 40 Code of Federal Regulations
18 part 82, as it read on January 3, 2017, consistent with this
19 section, the department shall interpret the term "aircraft
20 maintenance" to mean activities to support the production,
21 fabrication, manufacture, rework, inspection, maintenance,



1 overhaul, or repair of commercial, civil, or military aircraft,
2 aircraft parts, aerospace vehicles, or aerospace components.

3 **§342B-D Authority to regulate supplementary.** The
4 authority granted by this part to the department to restrict the
5 use of substitutes shall be supplementary to the department's
6 authority to control air pollution pursuant to this chapter.
7 Nothing in this part shall be construed to limit any authority
8 granted to the department under any other law.

9 **§342B-E Use of commercial refrigeration equipment after**
10 **effective date of restrictions.** Except where existing equipment
11 is retrofit, the restrictions of this part shall not apply to or
12 limit any use of commercial refrigeration equipment that was
13 installed or placed in use prior to the effective date of the
14 restrictions established in this part."

15 SECTION 3. Chapter 103D, Hawaii Revised Statutes, is
16 amended by adding a new section to part X to be appropriately
17 designated and to read as follows:

18 "§103D- Preference for products that do not contain
19 hydrofluorocarbons. (a) The policy board shall adopt rules
20 that provide a preference for products that:

21 (1) Are not restricted under section 342B-B;



- 1 (2) Do not contain hydrofluorocarbons or contain
2 hydrofluorocarbons with a comparatively low global
3 warming potential;
- 4 (3) Are not designed to function only in conjunction with
5 hydrofluorocarbons characterized by a comparatively
6 high global warming potential; and
- 7 (4) Were not manufactured using hydrofluorocarbons or were
8 manufactured using hydrofluorocarbons with a low
9 global warming potential.
- 10 (b) A governmental body shall not knowingly purchase a
11 product that is not accorded a preference in the purchasing and
12 procurement rules established by the policy board pursuant to
13 subsection (a) unless there is no cost-effective and
14 technologically feasible option that is accorded a preference.
- 15 (c) Nothing in this section shall require a governmental
16 body to breach an existing contract or dispose of stock that has
17 been ordered or is in the possession of the governmental body as
18 of the effective date of this section.
- 19 (d) As used in this section, "hydrofluorocarbon" shall
20 have the same meaning as in section 342B-A."



1 SECTION 4. Chapter 107, Hawaii Revised Statutes, is
2 amended by adding a new section to part II to be appropriately
3 designated and to read as follows:

4 "§107- State building codes; hydrofluorocarbons;
5 updates. (a) When adopting, amending, or updating the codes
6 and standards identified in section 107-25, the council shall
7 establish codes and standards that permit the use of substitutes
8 and do not require the use of substitutes that are restricted by
9 section 342B-B.

10 (b) As used in this section, "substitute" shall have the
11 same meaning as in section 342B-A."

12 SECTION 5. (a) The Hawaii state energy office, in
13 conjunction with the environmental management division of the
14 department of health, shall conduct a study that:

- 15 (1) Addresses how to increase the use of refrigerants with
16 low global warming potential in mobile sources,
17 utility equipment, and consumer appliances;
- 18 (2) Addresses how to reduce other uses of
19 hydrofluorocarbons in the State; and
- 20 (3) Provides recommendations for funding, structuring, and
21 prioritizing a state program that incentivizes or



1 provides grants to support the elimination of legacy
 2 uses of all hydrofluorocarbons, including
 3 hydrofluorocarbons that are not regulated by section 2
 4 of this Act.

5 (b) The Hawaii state energy office shall submit a report
 6 of its findings and recommendations, including any proposed
 7 legislation, to the legislature no later than December 1, 2022.

8 SECTION 6. There is appropriated out of the general
 9 revenues of the State of Hawaii the sum of \$ or so
 10 much thereof as may be necessary for fiscal year 2020-2021 for
 11 the Hawaii state energy office, in conjunction with the
 12 environmental management division of the department of health,
 13 to conduct the study pursuant to section 5 of this Act.

14 The sum appropriated shall be expended by the department of
 15 business, economic development, and tourism for the purposes of
 16 this Act.

17 SECTION 7. This Act does not affect rights and duties that
 18 matured, penalties that were incurred, and proceedings that were
 19 begun before its effective date.

20 SECTION 8. If any provision of this Act, or the
 21 application thereof to any person or circumstance, is held



1 invalid, the invalidity does not affect other provisions or
2 applications of the Act that can be given effect without the
3 invalid provision or application, and to this end the provisions
4 of this Act are severable.

5 SECTION 9. In codifying the new sections added by section
6 2 of this Act, the revisor of statutes shall substitute
7 appropriate section numbers for the letters used in designating
8 the new sections in this Act.

9 SECTION 10. New statutory material is underscored.

10 SECTION 11. This Act shall take effect on July 1, 2050.



Report Title:

Greenhouse Gas Emissions; Hydrofluorocarbons; Hawaii State Energy Office; Environmental Management Division; DOH; Phase Out; Procurement; Study; Appropriation

Description:

Establishes regulations on the use of hydrofluorocarbons in state law. Phases out hydrofluorocarbons in favor of alternatives with lower global warming potential. Establishes a preference for products that do not contain hydrofluorocarbons in the state procurement code. Directs the Hawaii State Energy Office and the Environmental Management Division of the Department of Health to study how to increase the use of refrigerants with low global warming potential, reduce the use of hydrofluorocarbons, and recommend how to fund, structure, and prioritize a state program that incentivizes or provides grants to support the elimination of legacy uses of hydrofluorocarbons. Appropriates funds for the study to be performed by the Hawaii State Energy Office. Effective 7/1/2050. (HD2)

The summary description of legislation appearing on this page is for informational purposes only and is not legislation or evidence of legislative intent.

