



**TESTIMONY OF
THE DEPARTMENT OF THE ATTORNEY GENERAL
THIRTIETH LEGISLATURE, 2020**

ON THE FOLLOWING MEASURE:

H.B. NO. 2492, RELATING TO HYDROFLUOROCARBONS.

BEFORE THE:

HOUSE COMMITTEE ON ENERGY AND ENVIRONMENTAL PROTECTION

DATE: Thursday, January 30, 2020 **TIME:** 8:30 a.m.

LOCATION: State Capitol, Room 325

TESTIFIER(S): Clare E. Connors, Attorney General, or
William F. Cooper, Deputy Attorney General

Chair Lowen and Members of the Committee:

The Department of the Attorney General offers the following comments on this bill.

The main purpose of H.B. No. 2492 is to reduce the use and emissions of hydrofluorocarbons (HFC). Section 342B-B, subsection (e), on page 10, lines 6 -15, allows the department of health to adopt restrictions on HFC type substitutes applicable to new light duty vehicles in order to reduce the emissions of HFCs. This affects the air conditioning in new vehicles with low HFC alternatives. In order to utilize these new alternatives, the new vehicles must have unique fittings and additional incorporated engineering strategies and/or devices.

These restrictions would conflict with the Clean Air Act (CAA). In 42 U.S. Code section 7543 of the CAA, "State standards", subsection (a), Prohibition, it states:

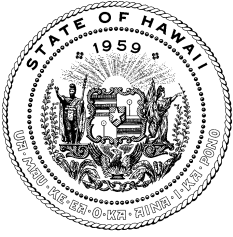
No State or any political subdivision thereof shall adopt or attempt to enforce any standard relating to the control of emissions from new motor vehicles or new motor vehicle engines subject to this part. No State shall require certification, inspection, or any other approval relating to the control of emissions from any new motor vehicle or new motor vehicle engine as condition precedent to the initial retail sale, titling (if any), or registration of such motor vehicle, motor vehicle engine, or equipment.

The proposed section 342B-B, subsection (e), on page 10, lines 6 - 15, of the bill could conflict with the CAA by requiring additional unique fittings and/or engineering strategies and/or devices for new motor vehicles. Although the CAA allows for the

State of California to request a waiver from the EPA, and for other qualifying States to join in on California's waiver, California has not requested a waiver, and Hawai'i is not a qualifying state. Therefore, even if California obtains a waiver, Hawai'i is unlikely to be able to adopt restrictions, and section 342B-B, subsection (e), on page 10, lines 6 – 15, should be deleted.

The second concern is that the penalties found in section 342B-H on page 15, line 9, to page 17, line 8, are redundant and not necessary. Proposed subsections (a), (b), and (e) on pages 15 and 16 of the bill are already provided in Hawaii Revised Statutes (HRS) chapter 342B, sections 342B-42, 342B-47, 342B-48, and 342B-50. Lastly, proposed subsections (c), (d), (f), and (g), on pages 15 - 17 of this bill, are inconsistent with the other penalty sections found in HRS chapters 342B, 342D, 342E, 342F, 342G, 342H, 342I, 342J, 342L, and 342P and are not necessary. Thus, subsections (a) through (g) should be deleted.

Thank you for the opportunity to testify on this bill.



HAWAII STATE ENERGY OFFICE STATE OF HAWAII

235 South Beretania Street, 5TH Floor, Honolulu, HI 96813 | energy.hawaii.gov

DAVID Y. IGE
GOVERNOR

SCOTT J. GLENN
CHIEF ENERGY OFFICER

(808) 587-3807

Testimony of **SCOTT J. GLENN, Chief Energy Officer**

before the
HOUSE COMMITTEE ON ENERGY & ENVIRONMENTAL PROTECTION
Thursday, January 30, 2020
8:30 AM
State Capitol, Conference Room 325

In SUPPORT of **HB 2492** **RELATING TO HYDROFLUOROCARBONS.**

Chair Lowen, Vice Chair Wildberger, and members of the Committee. The Hawaii State Energy Office (HSEO) supports HB 2492, which preserves preexisting federal regulations on the use of hydrofluorocarbons in state law. The bill 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, and directs the HSEO 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.

According to the Hawaii Department of Health Greenhouse Gas Inventory for 2016 (published this year),

“hydrofluorocarbons (HFCs) and perfluorocarbons (PFCs) are used as alternatives to ozone depleting substances (ODS) that are being phased out under the Montreal Protocol and the Clean Air Act Amendments of 1990. These chemicals are most commonly used in refrigeration and air conditioning equipment, solvent cleaning, foam production, fire extinguishing, and aerosols. In 2016, emissions from ODS substitutes in Hawaii were 0.77 MMT CO₂ Eq., accounting for **99 percent of IPPU sector emissions**. Nationally, emissions from ODS substitutes have risen dramatically since 1990, and now represent one of the largest sources of GHG emissions from the [Industrial Processes and Product Use] sector (EPA 2018a).”

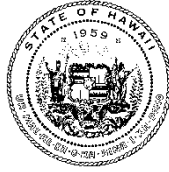
Furthermore, in recognition of this national need for action, many U.S. states are taking steps to address HFCs such as sharing technical expertise through the U.S. Climate Alliance. The Alliance is a bipartisan coalition of U.S. states that represents 55 percent of the U.S.

population and an \$11.7 trillion economy – an economy larger than all countries but the U.S. itself and China. The climate and clean energy policies in Alliance states have attracted billions of dollars of new investment and helped create more than 1.7 million clean energy jobs, over half the U.S. total. In 2018, the Alliance published a [roadmap for states to reduce short-lived climate pollutants such as HFCs](#). Taking legislative action such as this is consistent with other U.S. states, thus creating a common set of standards for a more unified market across the country.

The HSEO defers to and is ready to work with state agencies on how best to implement their responsibilities identified in the bill.

Thank you for the opportunity to testify on this bill.

DAVID Y. IGE
GOVERNOR



SARAH ALLEN
ADMINISTRATOR
BONNIE KAHAKUI
ASSISTANT ADMINISTRATOR

STATE OF HAWAII
STATE PROCUREMENT OFFICE

P.O. Box 119
Honolulu, Hawaii 96810-0119
Tel: (808) 586-0554
email: state.procurement.office@hawaii.gov
<http://spo.hawaii.gov>
Twitter: [@hawaiispo](https://twitter.com/hawaiispo)

TESTIMONY
OF
SARAH ALLEN, ADMINISTRATOR
STATE PROCUREMENT OFFICE
TO THE HOUSE COMMITTEE
ON
ENERGY & ENVIRONMENTAL PROTECTION

January 30, 2020, 8:30 A.M

HB2492
RELATING TO HYDROFLUOROCARBONS

Chair Lowen, Vice Chair Wildberger, and members of the Committee, thank you for the opportunity to submit testimony on HB2492. The State Procurement Office (SPO) supports the intent of the bill, however, opposes the language in its entirety, in Section 3. Specifications such as these should not be included in the Procurement Code, HRS §103D.

The use of hydrofluorocarbons in the industry and the impact to the environment are so specific that it should reside in the chapter governing "Air Pollution Control". The Code should be kept streamlined, rather than a receptacle for all department's specific requirements or specifications.

Thank you



STATE OF HAWAII
DEPARTMENT OF HEALTH
P. O. Box 3378
Honolulu, HI 96801-3378
doh.testimony@doh.hawaii.gov

**Testimony in SUPPORT of HB 2492
RELATING TO HYDROFLUOROCARBONS**

REPRESENTATIVE NICOLE LOWEN, CHAIR
HOUSE COMMITTEE ON ENERGY AND ENVIROMENTAL PROTECTION
Hearing Date: 1/30/2020 Room Number: 325

1 **Fiscal Implications:** This measure may impact the priorities identified in the Governor's Executive
2 Budget Request for the Department of Health's (Department) appropriations and personnel priorities.
3 This measure will increase demand on the Department's resources.

4 **Department Testimony:** The Department supports this bill with comments and offers
5 amendments.

6 The bill proposes to establish a new program to regulate Hydrofluorocarbons (HFCs) that
7 impact climate change within the Department but does not provide staff or funding. We find that
8 the regulatory language in Section 2 of the bill is almost identical to the 2019 act passed in the
9 state of Washington. We propose to adopt the language from Vermont, a smaller, non-industrial
10 state that more closely resembles Hawaii than does Washington. When compared to the
11 Washington act, the Vermont statute accomplishes the same goal of prohibiting the use of HFCs
12 with high global warming potential (GWP), but has fewer requirements which would save time
13 and resources in both establishing rules and implementing the program. Requirements that are
14 not explicit in the Vermont act can be added by rule making. Adopting language similar to
15 Vermont would also provide increased flexibility allowing Hawaii to align with the United States
16 Climate Alliance as they develop their model rule for regulation of hydrofluorocarbons.

17 It is our understanding that the states, of which there are about a dozen, that have or are in
18 the process of implementing a regulatory program differ slightly in approach but all achieve the

1 goal of prohibiting HFCs with high GWPs and thereby encouraging manufacturers to provide
2 only acceptable alternatives.

3 The Department agrees with the language in Section 5 which requires a study and report
4 to the Legislature. We do not have comments on Sections 3 and 4.

5 **Offered Amendments:** We propose to replace the substantive portion of Section 2 in the bill with
6 the attached document.

7 Thank you for the opportunity to testify on this measure.

Attachment to Department of Health’s Testimony Offering Amendments to HB 2492

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

“PART . REGULATION OF HYDROFLUOROCARBONS

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

“Class I substance” and “class II substance” mean those substances listed in the 42 U.S.C. § 7671a, as it read on November 15, 1990 and Appendix A or B of Subpart A of 40 C.F.R. Part 82, as those read on January 3, 2017.

“Hydrofluorocarbon” means a class of greenhouse gases that are saturated organic compounds containing hydrogen, fluorine, and carbon.

“Consumer refrigeration product” has the same meaning as in Section 430.2 of Subpart A of 10 C.F.R. Part 430.

“Retrofit” has the same meaning as in section 152 of Subpart F of 40 C.F.R. Part 82, as that section existed as of January 3, 2017.

“Substitute” means a chemical, product, or alternative manufacturing process, whether new or retrofit, 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 hydrofluorocarbons.

§342B-B Regulation of hydrofluorocarbons. (a) A person may not offer any product or equipment for sale, lease, or rent, or install or otherwise cause any equipment or product to enter into commerce in the State if that equipment or product consists of, uses, or will use a substitute, as set forth in Appendix U or V, Subpart G of 40 C.F.R. Part 82, as those read on January 3, 2017, for the applications or end uses restricted by Appendix U or V, as those read on January 3, 2017, and consistent with the dates established in subsection (d).

(b) Except where existing equipment is retrofit, nothing in this subsection requires a person that acquired a restricted product or equipment prior to an effective date of the restrictions in subsection (d) to cease use of that product or equipment.

(c) Products or equipment manufactured prior to an applicable effective date of

the restrictions in subsection (d) may be sold, imported, exported, distributed, installed, and used after the specified effective date.

- (d) The restrictions under subsection (a) shall take effect beginning:
 - (1) January 1, 2021, for:
 - (A) Propellants;
 - (B) Rigid polyurethane applications and spray foam, flexible polyurethane, integral skin polyurethane, flexible polyurethane foam, polystyrene extruded sheet, polyolefin, phenolic insulation board and bunstock, and
 - (C) Supermarket systems, remote condensing units, and stand-alone units;
 - (2) January 1, 2022, for:
 - (A) Refrigerated food processing and dispensing equipment;
 - (B) Compact residential consumer refrigeration products;
 - (C) Polystyrene extruded boardstock and billet, and rigid polyurethane low-pressure two component-spray foam; and
 - (D) Vending machines;
 - (3) January 1, 2023, for consumer refrigeration products other than compact and built-in residential consumer refrigeration products;
 - (4) July 1, 2023, for cold storage warehouses;
 - (5) July 1, 2024, for built-in consumer refrigeration products, centrifugal chillers and positive displacement chillers, and
 - (6) On either July 1, 2022, or the effective date of the restrictions identified in appendixes U and V1 Subpart G of 40 Code of Federal Regulations Part 82, as those read on January 3, 2017, whichever is later, for all other applications and end uses for substitutes not covered by the categories listed in paragraphs (1) through (5) of this subsection.
- (e) The department may adopt rules that include any of the following:
 - (1) The modification of the date of a prohibition established pursuant to subsection (d) if the department determines that the modified deadline meets both of the following criteria:
 - (A) Reduces the overall risk to human health or the environment; and

- (B) Reflects the earliest date that a substitute is currently or potentially available.
- (2) The prohibition on the use of any substitute if the department determines that the prohibition meets both of the following criteria:
 - (A) Reduces the overall risk to human health or the environment; and
 - (B) A lower-risk substitute is currently or potentially available.
- (3) The creation of a list of approved substitutes, use conditions, or use limits, if any, and the addition or removal of substitutes, use conditions, or use limits to or from the list of approved substitutes if the department determines those substitutes reduce the overall risk to human health and the environment.
- (4) The creation of a list of exemptions from this section for medical uses of hydrofluorocarbons.
- (f) If the U.S. Environmental Protection Agency approves a previously prohibited hydrofluorocarbon blend with a global warming potential of 750 or less for foam blowing of polystyrene extruded boardstock and billet and rigid polyurethane low-pressure two-component spray foam pursuant to the Significant New Alternatives Policy Program under section 7671(k) of the federal Clean Air Act (42 U.S.C. Sec. 7401 et seq.), the department shall expeditiously propose a rule to conform to the requirements established under this section with that federal action.



1111 19th Street NW > Suite 402 > Washington, DC 20036
t 202.872.5955 f 202.872.9354 www.aham.org

January 28, 2019

Representative Nicole E. Lowen
Chair
Committee on Energy & Environmental Protection
Hawaii House of Representatives
Honolulu, HI 96813

Re: HB 2492, relating to hydrofluorocarbons

Dear Chair Lowen,

The Association of Home Appliance Manufacturers (AHAM) has suggested amendments to HB 2492, relating to hydrofluorocarbons. AHAM represents manufacturers of major, portable and floor care home appliances, and suppliers to the industry. AHAM's membership includes over 150 companies that employ tens of thousands of people and produce more than 95% of the household appliances that are shipped for sale within the US. The factory shipment value of these products is more than \$38 billion annually. The home appliance industry, through its products and innovation, is essential to consumer lifestyle, health, safety and convenience. Through its technology, employees and productivity, the industry contributes significantly to the U.S. job market and the nation's economic security. Home appliances also are a success story in terms of energy efficiency and environmental protection. The purchase of new appliances often represents the most effective choice a consumer can make to reduce home energy use and costs.

It is important to avoid a patchwork of differing state requirements on HFCs and consumer refrigerator/freezers. HB 2492 largely accomplishes this by ensuring the effective dates for the restrictions are not earlier than other states that have acted on this matter. In addition, the bill uses the federal regulatory definitions for "consumer refrigeration products," which all the other state laws have referenced.

However, the bill should make clear that the effective dates are based on the date a product was manufactured. Below is legislative language from the Vermont (S30) and Washington (HB1112) laws that accomplish this objective.

Products or equipment manufactured prior to an applicable effective date of the restrictions in subdivision XXX of this section may be sold, imported, exported, distributed, installed, and used after the specified effective date.

In addition, disclosure of substitutes is not necessary. It will be a costly effort for both the state and for manufactures to have state-specific disclosure requirements. For consumer refrigeration products, labeling is already required by safety standards and codes. There is no need for Hawaii to create a redundant disclosure requirement. Neither California nor Vermont's law has a disclosure requirement, and EPA did not require one either. We would ask you to delete that section of the bill to make it consistent with California and Vermont.

Thank you for considering these views and we look forward to working with you on this bill.

Sincerely,

A handwritten signature in blue ink, appearing to read "Kevin Messner", written in a cursive style.

Kevin Messner
Sr. Vice President, Policy & Government Relations



Pono Hawai'i Initiative

Josh Frost - President • Patrick Shea - Treasurer • Kristin Hamada
Nelson Ho • Summer Starr

Wednesday, January 29, 2020

Relating to Hydrofluorocarbons
Testifying in Support

Aloha Chair and members of the committee,

The Pono Hawai'i Initiative (PHI) **supports HB2492 Relating to Hydrofluorocarbons**. This measure will help to phase out the use of hydrofluorocarbons to be replaced with safer alternatives.

This measure will help Hawaii's efforts to lower greenhouse gas emission and help to mitigate the effects of climate change. With the lack of federal action, it is up to the State to step up and address the issues surrounding hydrofluorocarbons. We cannot wait for federal law to catch up to the impacts of climate change.

For all these reasons, we urge you to move this bill forward.

Mahalo for the opportunity,
Gary Hooser
Executive Director
Pono Hawai'i Initiative



TESTIMONY OF
THE AIR-CONDITIONING, HEATING, AND REFRIGERATION INSTITUTE

BEFORE THE HAWAII STATE LEGISLATURE
HOUSE COMMITTEE ON ENERGY AND ENVIRONMENTAL PROTECTION

HEARING ON HB 2492

JANUARY 30, 2020

Chair Lowen and members of the House Committee on Energy and Environmental Protection, thank you for allowing the Air-Conditioning, Heating, and Refrigeration Institute (AHRI) to submit written testimony with respect to House Bill 2492 (HB 2492) and its intents to reduce greenhouse gas emissions from hydrofluorocarbons (HFCs). AHRI supports HB 2492, but respectfully requests that the Committee consider an implementation delay for the products and equipment listed in §342B-B(a)(1).

AHRI represents more than 300 manufacturers of air conditioning, heating, and commercial refrigeration equipment. It is an internationally recognized advocate for the HVACR industry and certifies the performance of many of the products manufactured by its members. In North America, the annual economic activity resulting from the HVACR industry is approximately \$256 billion. In the United States alone, AHRI members companies, along with distributors, contractors, and technicians employ more than 1.3 million people.

AHRI has been actively engaged with rulemakings and legislation at the international, federal, and state levels supporting the reduction of HFC emissions from stationary air conditioning and refrigeration systems. As an association, we have organized our members and facilitated information sharing with all of the states that have announced an intent to regulate HFC emissions.

It is our goal that through providing technical feedback and industry expertise we can help states, including Hawaii, adopt and implement laws and regulations that achieve the objectives stated in HB 2492 – to transition Hawaii from HFCs to replacement refrigerants that have lower global warming potential and that pose lower overall risks to human health and the environment.

AHRI supports the legislation and its intent to adopt the Environmental Protection Agency's Significant New Alternatives Policy (SNAP) Program Rules 20 and 21. However, we **respectfully request two minor modifications to §342B-B:**

- 1. Delay the compliance deadline for the products and equipment listed in §342B-B(a)(1) until January 1, 2022, to ensure that our manufacturers have sufficient time to prepare for, and ensure compliance with, Hawaii's regulations.**
- 2. To provide better clarity for manufacturers and distributors, amend the language in §342B-B(a) to read as follows:**

(a) No person shall offer any product or equipment for sale, lease, rent, or installation, or otherwise cause the product or equipment ~~to enter commerce~~ to be installed in the State if that equipment or product consists of, uses, or will use a substitute, consistent with the deadlines established in subsection (b).

Also, of note, **AHRI would like to specifically mention our industry's very strong support for §107, which directs the Hawaii Building Code Council to establish codes and standards to permit the use of substitutes required by the regulations.** Maintaining this language is critical, as the adoption of appropriate safety standards into building codes must be completed to enable the lower global warming potential solutions needed to comply with the legislation. Large commercial chiller systems, in particular, will require the adoption of new consensus safety standards into Hawaii's building codes to comply with this legislation.

We hope this is the start of an ongoing conversation between the Hawaii State Legislature and AHRI. We believe that AHRI can provide helpful recommendations during the legislative -- and subsequent regulatory -- process that are technically feasible, allow for market certainty, and benefit consumers and the industries that serve them, while still positively impacting the environment without imposing an undue burden on manufacturers.

Thank you for the opportunity to submit testimony for this hearing. AHRI looks forward to working with Chair Lowen and the Hawaii Legislature, so we can be partners in supporting and achieving the phase down of high-global warming potential HFCs.

HB-2492

Submitted on: 1/29/2020 7:54:13 PM

Testimony for EEP on 1/30/2020 8:30:00 AM

Submitted By	Organization	Testifier Position	Present at Hearing
David Mulinix	Our Revolution Hawaii	Support	No

Comments:

LATE



183 Pinana St., Kailua, HI 96734 • 808-262-1285 • info@350Hawaii.org

To: The House Committee on Energy & Environmental Protection
From: Brodie Lockard, Founder, 350Hawaii.org
Date: Thursday, January 30, 2020, 8:30 am

In strong support of HB 2492

Dear Chair Lowen, Vice Chair Wildberger, and members:

350Hawaii.org strongly supports HB 2492.

Though carbon dioxide is the main culprit in global warming, other gases also trap heat in the atmosphere.

Hydrofluorocarbons (HFCs), primarily used for cooling and refrigeration, were developed to replace ozone-depleting substances. But it turns out they cause other problems, in particular acting as greenhouse gases.

We need to concentrate on decreasing CO₂ and methane emissions, but also stop using HFCs.

HB 2492 phases out HFCs in favor of alternatives with lower global warming potential, in the state procurement code.

It also directs the Department of Health to study how to increase the use of refrigerants with low global warming potential, and to recommend ways to incentivize this use.

I urge you to pass HB 2492 and fight the Climate Crisis in one more way.

Brodie Lockard
Founder, 350Hawaii.org

TESTIMONY

CHRISTINA THEODORIDI
TECHNICAL ANALYST, CLIMATE & CLEAN ENERGY

ON BEHALF OF
THE NATURAL RESOURCES DEFENSE COUNCIL

BEFORE THE HAWAII STATE LEGISLATURE
HOUSE COMMITTEE ON ENERGY & ENVIRONMENTAL PROTECTION

IN SUPPORT OF HB2492
RELATING TO HYDROFLUOROCARBONS

January 30, 2020

LATE



Chair Lowen and members of the committee,

My name is Christina Theodoridi and I am a technical analyst for the Natural Resources Defense Council based in Washington, DC.

NRDC is a non-profit environmental organization with a network of 3 million members and online activists. Within our Climate & Clean Energy Program, our small but dedicated team has worked for several decades to end the use of refrigerants that deplete the ozone layer and cause climate change.

I would like to express strong support for this bill, which seeks to reduce the emissions of hydrofluorocarbons (or HFCs). HFCs have a heat-trapping capacity thousands of times larger than that of carbon dioxide and their emissions are growing quickly worldwide. This bill is a critical step to reducing the emissions of these powerful pollutants and we commend the Committee for taking it into consideration.

This bill adopts the EPA's SNAP rules into state law, providing much-needed certainty for the transition to climate-friendly alternatives and will help the American industry gain a competitive advantage in global markets. The transition benefits both businesses and the environment, creating a unique area of cooperation between most of industry and environmentalists.

The bill provides a transition schedule that prohibits the use of certain climate-warming HFCs in new products and equipment. We strongly encourage you to keep the transition schedule aligned with other states that have recently adopted or are currently considering similar regulations such as California, Washington, Vermont, New York, Maryland, Delaware, Massachusetts and Colorado - this way the compliance burden on manufacturers will be minimized.

Globally, HFCs will be phased down under the Kigali Amendment to the Montreal Protocol which entered into force as international law on January 1st of this year, without the U.S.'s ratification. Meanwhile, the world is looking to the U.S. – a key proponent of the deal – to live up to its commitments and lead by example. EPA's efforts to reduce the pollutants have stalled at a crucial moment after the U.S. Court of Appeals for the D.C. Circuit partially vacated EPA's HFC rules. With the federal government in disarray, state action is now a linchpin of the global effort to phase down HFCs under the Montreal Protocol's Kigali Amendment and states like Hawaii have a chance to keep up our end of the global deal to phase down HFC use and meet our international climate change commitments.

We strongly support HB2492 and are looking forward to working with the committee and all stakeholders on this important climate issue. Thank you.

Sincerely,

CHRISTINA THEODORIDI

*Technical Analyst
Climate & Clean Energy and International Programs*

**NATURAL RESOURCES
DEFENSE COUNCIL**
1152 15th STREET NW
WASHINGTON, D.C. 20005
M 347 425 2540
E ctheodoridi@nrdc.org

HB-2492

Submitted on: 1/29/2020 7:05:50 AM

Testimony for EEP on 1/30/2020 8:30:00 AM

Submitted By	Organization	Testifier Position	Present at Hearing
Ted Bohlen	Climate Protectors Coalition	Support	No

Comments:

The Climate Protectors Coalition **strongly supports** HB2492!

We are a new group inspired by the Mauna Kea Protectors but focused on reversing the climate crisis. As a tropical island State, Hawaii will be among the first places harmed by the global climate crisis, with more intense storms, loss of protective coral reefs, and rising sea levels. We must do all we can to reduce our carbon footprint and become at least carbon neutral as soon as possible, including by reducing emissions of hydrofluorocarbons, very potent greenhouse gases (up to several thousand times CO2!) used for many refrigerants.

The bill should be amended to eliminate references to preempted emissions from motor vehicles. Also, it may be amended and implemented more easily by authorizing agency rulemaking. In any event, the Climate Protectors urge the Legislature to take strong action now to restrict these harmful emissions. Mahalo!

Jessica Olson

Honeywell supports HB 2492, which bolsters adoption of advanced American technologies by businesses.

HFCs are used throughout the world as refrigerants in air conditioning to cool cars, homes and buildings, in home and commercial refrigeration, in foam insulation, and as aerosol propellants and solvents. While efficient, many HFC products have high global warming-potential. Because HFCs are used in everyday life, replacing these products with next-generation alternatives can make a positive impact on the environment and human health.

Replacing HFCs with better alternatives is key to achieving greenhouse gas emissions reductions in Hawaii. Globally, replacing HFCs with low-global-warming-potential (or GWP) alternatives could avoid up to 0.5 degrees Celsius of warming by the end of the century.

American industry has invested well over \$1 billion domestically and employed more than 700,000 US workers to research, develop and implement alternative solutions to high-GWP HFCs. This includes newly constructed manufacturing hubs in the United States to produce such alternatives. This bill will help drive a transition to the low-GWP solutions and promote US leadership in innovation and manufacturing.

Because of this investment, **cost-effective, near drop-in alternatives to HFCs are commercially available today and are ready for widespread adoption.** In addition to lower GWP, technologies using environmentally preferable HFC alternatives are often also more energy efficient than traditional systems, and thus lower customer costs and increase competitiveness. Honeywell continues to work with our customers to ensure a smooth transition to these advanced technologies.

In 2015 and 2016, under the Significant New Alternatives Policy (SNAP) program US EPA established practical and reasonable timelines to transition the industry from outdated HFCs to safer next-generation alternative solutions on a clear and predictable schedule. However, litigation has undermined the SNAP timeline, upending a consistent federal approach to the HFC phasedown.

So states must take a lead on this essential initiative and with this bill Hawaii is seizing the opportunity to build upon growing state-level efforts.

California has already adopted SNAP transition dates, which took effect in 2018 and Washington state, Vermont, and New Jersey have recently adopted similar bills. HB 2492 has dates that are consistent with the SNAP deadlines and state programs now in effect in those four states. New York, Connecticut, Colorado, Delaware, Massachusetts, Maryland, and Pennsylvania are also taking similar actions. By passing this bill, Hawaii can take meaningful action to meet its environmental goals while also supporting American innovation and job creation within the United States.

For these reasons, Honeywell supports HB 2492. We look forward to working with you on this important effort.

HB-2492

Submitted on: 1/29/2020 8:18:46 AM

Testimony for EEP on 1/30/2020 8:30:00 AM

Submitted By	Organization	Testifier Position	Present at Hearing
Jan Barosh	Individual	Support	No

Comments:

HB-2492

Submitted on: 1/29/2020 7:35:19 AM

Testimony for EEP on 1/30/2020 8:30:00 AM

Submitted By	Organization	Testifier Position	Present at Hearing
Tawn Keeney	Individual	Support	No

Comments:

HB-2492

Submitted on: 1/29/2020 9:02:21 AM

Testimony for EEP on 1/30/2020 8:30:00 AM

Submitted By	Organization	Testifier Position	Present at Hearing
william metzger	Individual	Support	Yes

Comments:

HB-2492

Submitted on: 1/29/2020 6:02:13 AM

Testimony for EEP on 1/30/2020 8:30:00 AM

Submitted By	Organization	Testifier Position	Present at Hearing
Lynn Aaberg	Individual	Support	Yes

Comments:

Hydrofluorocarbons are bad news. Bad news to the environment and bad news to our health. They are a significant contributor to global warming. We managed to transition from chlorfluorocarbons, and this has the same potential. Thank you for support!

HB-2492

Submitted on: 1/29/2020 4:45:01 AM

Testimony for EEP on 1/30/2020 8:30:00 AM

Submitted By	Organization	Testifier Position	Present at Hearing
Nanea Lo	Individual	Support	No

Comments:

Hello,

My name is Nanea Lo and I'm a lifelong resident of Hawai'i on the island of O'ahu. I am also a masters student at the university of Hawai'i at MÄ• noa in the Department of Urban and Regional Planning. I fully support this bill.

me ke aloha 'Ä• ina,

Nanea Lo

HB-2492

Submitted on: 1/29/2020 8:48:27 AM

Testimony for EEP on 1/30/2020 8:30:00 AM

Submitted By	Organization	Testifier Position	Present at Hearing
Janet Pappas	Individual	Support	No

Comments:

Strongly support

HB-2492

Submitted on: 1/29/2020 9:02:40 AM

Testimony for EEP on 1/30/2020 8:30:00 AM

Submitted By	Organization	Testifier Position	Present at Hearing
J Riverstone	Individual	Support	No

Comments:

HB-2492

Submitted on: 1/28/2020 11:14:55 AM

Testimony for EEP on 1/30/2020 8:30:00 AM

Submitted By	Organization	Testifier Position	Present at Hearing
sherryl	Individual	Support	No

Comments:

I have been doing research on this problem. The following is just the tip of the iceberg!

Refrigerants are the number one contributor to global warming 1

- HFCs are extremely powerful, unregulated refrigerants. The most abundant HFC is 1,430 times more damaging to the climate than carbon dioxide 2
- The amount of HFCs in the atmosphere is currently small, but even small amounts are extremely destructive. And their emissions are growing by 10-15% per year, [doubling every five to seven years](#) . 2,3
- It is predicted that in 2020, globally, 41% of HFCs will be emitted by residential AC and motor vehicle AC (MVAC). 9
- Residential AC is predicted to increase four-fold by 2030, from 1.2 billion to 4.5 billion units. Studies predict that the estimated number of MVAC units in developing countries will increase from 200 million units in 2010 to 1 billion units by 2050. Not only will there be this dramatic increase in these units, but due to global warming, these units will be used for longer periods of time. 9,10
- HFC emissions from residential AC and MVAC units occur from leakage during use, during servicing, but with **90% of loss occurring at end-of-life disposal**. Even after HFCs are replaced, older cars and residential AC units, plus manufactured but unused HFCs will still remain a threat unless disposed of properly.1,9
- HFCs can be most effectively controlled through a phase down of their production and consumption. Curbing HFCs can bring climate relief relatively quickly due to its shorter lifespan in the atmosphere. 2,3

Solutions

- U.S. states are taking the lead in phasing down HFCs. In the U.S. California, Washington and Vermont have already passed legislation and 5 more states are committed to taking action. The response must be swift, and it is the states that are stepping forward. The federal government's will is lacking and its process too slow.4

- Supermarket companies have taken the lead in industry and are already transitioning to low GWP alternatives for refrigeration.. For example, Target began in 2010 with a CO2 cascade system, and in 2012, Albertson's used a NH3 system in its "Journey to Net-Zero". 5,6

- Many manufacturers, such as Honeywell and Chemours, are not waiting for the government to act on HFCs and have already started the transition to alternative refrigerants. They have prior experience with CFCs and HCFCs and are adept at handling these transitions. They want clear guidelines regarding the HFC phase down, and overwhelmingly support ratifying the Kigali Amendment.7,8

I applaud your willingness to jump in. You will be saving the world for our descendents.

Sherryl Royce

1 <https://www.drawdown.org/solutions/materials/refrigerant-management>

2 <https://www.ccacoalition.org/fr/slcp/hydrofluorocarbons-hfc>

3 <https://www.nrdc.org/experts/david-doniger/states-keep-rolling-hfc-phase-down>

4 [https://www.nrdc.org/sites/default/files/media-uploads/fact sheet on state hfc action 0.pdf](https://www.nrdc.org/sites/default/files/media-uploads/fact%20sheet%20on%20state%20hfc%20action%200.pdf)

5 http://www.r744.com/articles/6033/p_why_target_opted_for_co_sub_2_sub_as_its_prototype_p

6 [https://www.epa.gov/sites/production/files/documents/GC Webinar Ammonia Cascade 2012.11.15.pdf](https://www.epa.gov/sites/production/files/documents/GC_Webinar_AmmoniaCascade_2012.11.15.pdf)

7 <https://www.achrnews.com/articles/137172-hvacr-manufacturers-aim-to-phase-down-hfcs-regardless-of-regulations>

8 <https://www.reuters.com/article/us-companies-climatechange/u-s-companies-brace-for-climate-friendly-alternatives-in-cooling-systems-idUSKBN12H040>

9 [http://www.iifiir.org/userfiles/file/developing-countries/US Environmental Protection Agency/transitioning to low-gwp alternatives in motor vehicle air conditioning.pdf](http://www.iifiir.org/userfiles/file/developing-countries/US_Environmental_Protection_Agency/transitioning_to_low-gwp_alternatives_in_motor_vehicle_air_conditioning.pdf)

10 <https://insideclimatenews.org/news/11112018/climate-change-home-air-conditioning-half-degree-global-warming-by-2100>

HB-2492

Submitted on: 1/28/2020 1:25:48 PM

Testimony for EEP on 1/30/2020 8:30:00 AM

Submitted By	Organization	Testifier Position	Present at Hearing
pat gegen	Individual	Support	No

Comments:

HB-2492

Submitted on: 1/28/2020 4:07:20 PM

Testimony for EEP on 1/30/2020 8:30:00 AM

Submitted By	Organization	Testifier Position	Present at Hearing
Andrea Nandoskar	Individual	Support	No

Comments:

Please support HB 2492 as an important step toward restricting hydrofluorocarbons refrigerants--potent greenhouse gases, in Hawaii. Many other countries, companies and states are successfully transitioning to more benign technologies and so can we here in Hawaii. Paul Hawken's Project Drawdown research team identifies, reviews, and analyzes the most viable solutions to climate change, and shares these findings with the world. In a five-year study of the most impactful solutions to reversing global warming, refrigerant management was number 1. In their book [Drawdown](#), each solution is measured and modeled to determine its carbon impact through the year 2050, the total and net cost to society, and the total lifetime savings (or cost).

Mahalo for caring about our aina and your children and grandchildren's future.

HB-2492

Submitted on: 1/28/2020 5:28:39 PM

Testimony for EEP on 1/30/2020 8:30:00 AM

Submitted By	Organization	Testifier Position	Present at Hearing
Andrea Quinn	Individual	Support	Yes

Comments:

Dear Honorable Committee Members:

Please support HB2492. Phasing out hydrofluorocarbons will help mitigate climate change, which is already occurring.

Thank you for the opportunity to present my testimony.

Andrea Quinn

Kihei

HB-2492

Submitted on: 1/28/2020 11:12:25 PM

Testimony for EEP on 1/30/2020 8:30:00 AM

Submitted By	Organization	Testifier Position	Present at Hearing
Caroline Kunitake	Individual	Support	No

Comments:

Please support HB2492.

Mahalo,

Caroline Kunitake

HB-2492

Submitted on: 1/29/2020 12:31:27 AM

Testimony for EEP on 1/30/2020 8:30:00 AM

Submitted By	Organization	Testifier Position	Present at Hearing
Phaethon Keeney	Individual	Support	No

Comments:

To: The House Committee on Energy & Environmental Protection

From: Phaethon Keeney

In strong support of HB 2492

Dear Chair Lowen, Vice Chair Wildberger, and members:

I strongly support HB2492 to phase out hydrofluorocarbons in favor of alternatives with lower global warming potential and establish a preference for products that do not contain hydrofluorocarbons in the State procurement code. It's a good bill. Mahalo!

Phaethon Keeney

HB-2492

Submitted on: 1/29/2020 8:03:27 AM

Testimony for EEP on 1/30/2020 8:30:00 AM

Submitted By	Organization	Testifier Position	Present at Hearing
Julie Stowell	Individual	Support	No

Comments:

HB-2492

Submitted on: 1/29/2020 7:24:05 AM

Testimony for EEP on 1/30/2020 8:30:00 AM

Submitted By	Organization	Testifier Position	Present at Hearing
Meredith Buck	Individual	Support	No

Comments:

I support this bill.

HB-2492

Submitted on: 1/29/2020 9:56:35 AM

Testimony for EEP on 1/30/2020 8:30:00 AM

Submitted By	Organization	Testifier Position	Present at Hearing
Karen Shimizu	Individual	Support	No

Comments:

HB-2492

Submitted on: 1/29/2020 10:27:42 AM

Testimony for EEP on 1/30/2020 8:30:00 AM

Submitted By	Organization	Testifier Position	Present at Hearing
Dyson Chee	Individual	Support	No

Comments:

HB-2492

Submitted on: 1/29/2020 10:56:27 AM

Testimony for EEP on 1/30/2020 8:30:00 AM

Submitted By	Organization	Testifier Position	Present at Hearing
ChristopherMcCullough	Individual	Support	No

Comments:

HB-2492

Submitted on: 1/29/2020 11:20:15 AM

Testimony for EEP on 1/30/2020 8:30:00 AM

Submitted By	Organization	Testifier Position	Present at Hearing
Javier Mendez-Alvarez	Individual	Support	No

Comments:

HB-2492

Submitted on: 1/29/2020 3:26:17 PM

Testimony for EEP on 1/30/2020 8:30:00 AM

Submitted By	Organization	Testifier Position	Present at Hearing
Joshua Brown Clay	Individual	Support	No

Comments:

HB-2492

Submitted on: 1/29/2020 3:59:30 PM

Testimony for EEP on 1/30/2020 8:30:00 AM

Submitted By	Organization	Testifier Position	Present at Hearing
Chris Mentzel	Individual	Support	No

Comments:

HB-2492

Submitted on: 1/29/2020 7:19:22 PM

Testimony for EEP on 1/30/2020 8:30:00 AM

Submitted By	Organization	Testifier Position	Present at Hearing
Sherry Pollack	Individual	Support	No

Comments:

LATE

HB-2492

Submitted on: 1/29/2020 7:27:32 PM

Testimony for EEP on 1/30/2020 8:30:00 AM

Submitted By	Organization	Testifier Position	Present at Hearing
Linda Morgan	Individual	Support	No

Comments:

LATE

I strongly support HB 2492.

Though carbon dioxide is the main culprit in global warming, other gases also trap heat in the atmosphere.

Hydrofluorocarbons (HFCs), primarily used for cooling and refrigeration, were developed to replace ozone-depleting substances. But it turns out they cause other problems, in particular acting as greenhouse gases.

We need to concentrate on decreasing CO2 and methane emissions, but also stop using HFCs.

HB 2492 phases out HFCs in favor of alternatives with lower global warming potential, in the state procurement code.

It also directs the Department of Health to study how to increase the use of refrigerants with low global warming potential, and to recommend ways to incentivize this use.

I urge you to pass HB 2492 and fight the Climate Crisis in one more way.

HB-2492

Submitted on: 1/29/2020 9:30:01 PM

Testimony for EEP on 1/30/2020 8:30:00 AM

Submitted By	Organization	Testifier Position	Present at Hearing
Noel Morin	Individual	Support	No

Comments:

Dear Chair Lowen, Vice Chair Wildberger, and members:

LATE

I strongly support HB 2492.

While CO2 is the key driver of global warming, there are others. In order to help mitigate global warming and the resultant climate crisis, we need to find ways to reduce all egregious/crisis-contributing greenhouse emissions.

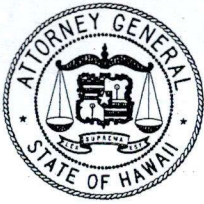
Hydrofluorocarbons (HFCs), generally used for cooling and refrigeration is one such substance. While they play a critical role in cooling technology, they are significantly to our climate problem.

This bill will allow us to gradually phase out HFCs by incentivizing the creation and use of alternatives in the State's procurement process.

Please pass HB 2492.

Noel Morin

Hilo



**TESTIMONY OF
THE DEPARTMENT OF THE ATTORNEY GENERAL
THIRTIETH LEGISLATURE, 2020**

ON THE FOLLOWING MEASURE:
H.B. NO. 2492, RELATING TO HYDROFLUOROCARBONS.

LATE

BEFORE THE:
HOUSE COMMITTEE ON ENERGY AND ENVIRONMENTAL PROTECTION

DATE: Thursday, January 30, 2020 **TIME:** 8:30 a.m.

LOCATION: State Capitol, Room 325

TESTIFIER(S): Clare E. Connors, Attorney General, or
William F. Cooper, Deputy Attorney General

Chair Lowen and Members of the Committee:

The Department of the Attorney General offers the following comments on this bill.

The main purpose of H.B. No. 2492 is to reduce the use and emissions of hydrofluorocarbons (HFC). Section 342B-B, subsection (e), on page 10, lines 6 -15, allows the department of health to adopt restrictions on HFC type substitutes applicable to new light duty vehicles in order to reduce the emissions of HFCs. This affects the air conditioning in new vehicles with low HFC alternatives. In order to utilize these new alternatives, the new vehicles must have unique fittings and additional incorporated engineering strategies and/or devices.

These restrictions would conflict with the Clean Air Act (CAA). In 42 U.S. Code section 7543 of the CAA, "State standards", subsection (a), Prohibition, it states:

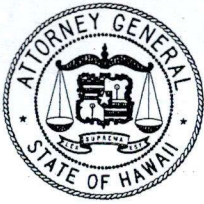
No State or any political subdivision thereof shall adopt or attempt to enforce any standard relating to the control of emissions from new motor vehicles or new motor vehicle engines subject to this part. No State shall require certification, inspection, or any other approval relating to the control of emissions from any new motor vehicle or new motor vehicle engine as condition precedent to the initial retail sale, titling (if any), or registration of such motor vehicle, motor vehicle engine, or equipment.

The proposed section 342B-B, subsection (e), on page 10, lines 6 - 15, of the bill could conflict with the CAA by requiring additional unique fittings and/or engineering strategies and/or devices for new motor vehicles. Although the CAA allows for the

State of California to request a waiver from the EPA, and for other qualifying States to join in on California's waiver, California has not requested a waiver, and Hawai'i is not a qualifying state. Therefore, even if California obtains a waiver, Hawai'i is unlikely to be able to adopt restrictions, and section 342B-B, subsection (e), on page 10, lines 6 – 15, should be deleted.

The second concern is that the penalties found in section 342B-H on page 15, line 9, to page 17, line 8, are redundant and not necessary. Proposed subsections (a), (b), and (e) on pages 15 and 16 of the bill are already provided in Hawaii Revised Statutes (HRS) chapter 342B, sections 342B-42, 342B-47, 342B-48, and 342B-50. Lastly, proposed subsections (c), (d), (f), and (g), on pages 15 - 17 of this bill, are inconsistent with the other penalty sections found in HRS chapters 342B, 342D, 342E, 342F, 342G, 342H, 342I, 342J, 342L, and 342P and are not necessary. Thus, subsections (a) through (g) should be deleted.

Thank you for the opportunity to testify on this bill.



**TESTIMONY OF
THE DEPARTMENT OF THE ATTORNEY GENERAL
THIRTIETH LEGISLATURE, 2020**

LATE

ON THE FOLLOWING MEASURE:
H.B. NO. 2492, RELATING TO HYDROFLUOROCARBONS.

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Thank you for the opportunity to testify on this bill.