

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 FINANCE
Tuesday, February 25, 2020
12:30 PM
State Capitol, Conference Room 308

In SUPPORT of **HB 2492, HD2** **RELATING TO HYDROFLUOROCARBONS.**

Chair Luke, Vice Chair Cullen, and Members of the Committee, the Hawaii State Energy Office (HSEO) supports HB 2492, HD2, which 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 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; appropriates funds for the study to be performed by the HSEO; to take effect 7/1/2050.

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

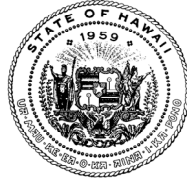
“hydrofluorocarbons (HFCs) and perfluorocarbons (PFCs) are used as alternatives to ozone depleting substances (ODS) that are being phased out under the Montreal Protocol and the Clean Air Act Amendments of 1990. These chemicals are most commonly used in refrigeration and air conditioning equipment, solvent 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. The HSEO has discussed and is working in conjunction with the Environmental Management Division of the Department of Health on the study outlined in Section 5 of the bill.

Thank you for the opportunity to testify on this bill.



**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, HD 2
RELATING TO HYDROFLUOROCARBONS**

REPRESENTATIVE SYLVIA LUKE, CHAIR
HOUSE COMMITTEE ON FINANCE

Hearing Date: 2/25/2020 Room Number: 308

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.

5 The bill proposes to establish a new program within the Department to regulate
6 Hydrofluorocarbons (HFCs) that impact climate change. The Department supports the phasing
7 out of HFCs with lower global warming potential alternatives to reduce greenhouse gas
8 emissions and help mitigate the effects of climate change. This bill aligns with many of
9 Hawaii's climate change goals and priorities and would move Hawaii forward in an area where
10 federal action has stalled. This measure would also align Hawaii's efforts with, and enable
11 Hawaii to benefit from, the expertise of the many other states of the U.S. Climate Alliance
12 currently developing a model rule to reduce HFCs.

13 **Offered Amendments:** None. The Department defers to the Hawaii State Energy Office on the
14 appropriation amount required to fund the study described in Section 5.

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

DAVID Y. IGE
GOVERNOR



SARAH ALLEN
ADMINISTRATOR
BONNIE KAHAKUI
ASSISTANT ADMINISTRATOR

STATE OF HAWAII
STATE PROCUREMENT OFFICE

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Honolulu, Hawaii 96810-0119
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Twitter: [@hawaiispo](https://twitter.com/hawaiispo)

TESTIMONY
OF
SARAH ALLEN, ADMINISTRATOR
STATE PROCUREMENT OFFICE

TO THE HOUSE COMMITTEE
ON
FINANCE

February 25, 2020, 12:30 P.M.

HB2492, HD2
RELATING TO HYDROFLUOROCARBONS

Chair Luke, Vice Chair Cullen, and members of the committee, thank you for the opportunity to submit testimony on HB2492, HD2. The State Procurement Office (SPO) appreciates the intent of the bill, however, the bill is asking for a preference when it is mandating it at the same time.

Similar to a recent implementation of a phased-in program for Hawaiian Plant Landscaping requirements, this bill should mandate specifications only and remove the preference, which would be extremely difficult to implement.

The language, in its entirety, in Section 3 does not belong in the procurement statute. Where the procurement code should be used for general policy, specifications are particular to a subject-specific chapter such as the chapter governing "Energy, Resilience and Sustainability." It is important to maintain this general policy to keep the Code streamlined, rather than becoming a catch-all for any and all subject-specific requirements and specifications.

The Procurement Policy Board (PPB), pursuant to HRS §103D-201(b), consists of the State Comptroller, a county procurement professional, a federal procurement professional, two health and human services professionals, and two other persons with significant procurement experience. With the exception of the State Comptroller's position on the board, the PPB consists of volunteer members. While members of the PPB are required to meet certain qualifications under HRS §103D-202, expertise in the field of hydrofluorocarbons is not one of them, and there is no staff member at the SPO who specializes in hydrofluorocarbons.

If the Legislature mandates the PPB engage in promulgating rules for hydrofluorocarbons, then significant funding and resources will be needed, since this function has not been funded by the Legislature in the past. The PPB does not have the resources to develop these rules. HRS §103D-201(c) states, "...The policy board shall be assisted by employees of the department of accounting and general services, which shall provide at least one full-time support staff and funding necessary to support the policy board..." This staff position has never come to pass and therefore it would fall to the SPO to assist in drafting these rules.

Therefore, if Rules need to be promulgated, SPO will require a consultant to develop these Rules. Our experience shows that it would cost approximately \$500,000.

Thank you

HB-2492-HD-2

Submitted on: 2/23/2020 1:12:08 PM

Testimony for FIN on 2/25/2020 12:30:00 PM

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

Comments:

HB2492 HD2

NOTICE OF HEARING

DATE: Tuesday, February 25, 2020

TIME: 12:30 pm

Conference Room 308

PLACE: State Capitol

415 South Beretania Street

Chair Luke, Vice Chair Cullen, and Finance Committee members:

The Climate Protectors Coalition **strongly supports** HB2492 HD2!

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. One important way to do so is by reducing emissions of hydrofluorocarbons, very potent greenhouse gases (up to several thousand times CO2!) used as cooling agents in air conditioners and refrigerators and in aerosol propellants, solvents, and foaming agents.

The bill as amended in HD1 is appropriate and the Climate Protectors urge the Committee to pass it. The Climate Protectors urge the Legislature to take strong action now to restrict these harmful hydrofluorocarbon emissions. Mahalo!



February 24, 2020

To: The Honorable Sylvia Luke, Chair
Members, House Committee on Finance

From: Tim Shestek
Senior Director, State Affairs

Re: **HB 2492 HD2 – Request for Amendment**

The American Chemistry Council (ACC) appreciate the opportunity to comment on HB 2492 HD 1, legislation pertaining to hydrofluorocarbons. ACC represents a diverse set of material manufacturers, including companies that produce and sell polyurethane spray foam insulation systems and the chemicals and equipment necessary for their use.

Should the committee pass this bill, ACC requests the following technical amendment, identified by the bold/underlined text below:

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

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

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

(c) This section does not apply to the use of substitutes in foam insulation.

Rationale: ACC believes this amendment is needed because the State Building Code does not require the use of foam insulation products formulated with hydrofluorocarbons, nor does it restrict the use of foam insulation products containing low global warming potential alternatives. As currently drafted, this section could create confusion or result in conflicting future rules for foam insulation products, such as spray foam insulation, that may be developed by the various regulatory agencies and the Building Code Council.

ACC appreciates the committee's consideration of this request. Should you have any questions, please do not hesitate to contact me at 916-448-2581 or tim_shestek@americanchemistry.com. You may also contact ACC's Hawaii-based representative Ross Yamasaki at 808-227-3650 or ryamasaki@808cch.com





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

To: The House Committee on Finance
From: Brodie Lockard, Founder, 350Hawaii.org
Date: Tuesday, February 25, 2020, 12:30 pm

In strong support of HB 2492 HD2

Dear Chair Luke, and members:

350Hawaii.org strongly supports HB 2492 HD2.

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

HB-2492-HD-2

Submitted on: 2/24/2020 11:49:24 AM

Testimony for FIN on 2/25/2020 12:30:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
sherryl	Project Drawdown, Honolulu	Support	No

Comments:

I would like to resubmit my testimony on HB2492. I **very strongly support** this bill. Regulating refrigerants is the **most effective** way to reverse global warming. (Information on this is provided below.) I am proud to live in a state that takes seriously its responsibility to protect the Earth and its inhabitants. I have faith that Hawaii, as a member of the **U.S. Climate Alliance**, will continue its leadership in this arena and will continue its support of this bill.

thank you,

Sherryl Royce

Impact of Hydrofluorocarbons (HFCs) on Global Warming

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 with low GWP alternatives, 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. A sufficient worldwide amount of HFCs is necessary for refrigerant blends, which is why this is not a complete phase out of these chemicals. 2,3,7

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

One reason for the current challenge is the absence of building and fire codes that would allow for new refrigerants (many of which are flammable) to be more broadly accepted. It is also critical that any HFC phase down align with future efficiency standards and regulations in order to avoid uncoordinated goals that make compliance difficult and inefficient for manufacturers and potentially expensive for end users. 7

Improve energy efficiency in homes and buildings and provide financing, subsidies, and other financial incentives to reduce upfront costs for consumers. Efficiency improvements could cut the energy growth from AC demand in half through mandatory energy performance standards 10, 12

EPA should extend air conditioning and refrigeration equipment servicing and disposal requirements under the Clean Air Act for other refrigerants [to HFCs](#) , as well as increase initiatives to capture and recycle HFCs from existing equipment to reduce the amount of new HFCs produced. 11

Benefits

In addition to the direct climate benefits from HFC mitigation, a global HFC phase down could also provide [indirect benefits](#) through improvements in the energy efficiency of the refrigerators, air conditioners, and other products and equipment that use these chemicals. These efficiency gains could also lead to reduced emissions of CO₂ and other air pollutants 2

The recent study, Economic Impacts of U.S. Ratification of the Kigali, states that the Kigali Amendment, or phase down of HFCs, gives American companies an advantage in technology, manufacturing, and investment, which will lead to job creation. The economic analysis indicates that U.S. implementation is good for American jobs, and it will both strengthen America's exports and weaken the market for imported products, while enabling U.S. technology to continue its world leadership role .The Kigali Amendment is projected to increase U.S. manufacturing jobs by 33,000 by 2027, increase exports by \$5 billion, reduce imports by nearly \$7 billion, and improve the HVACR balance of trade. Manufacturing equipment that utilizes non-HFCs could both improve the balance of trade and save American jobs 7

Phase out of CFCs spurred technological development and investment in a new generation of air conditioning and refrigeration equipment, creating [significant benefits](#) to public health and the environment while producing lifetime savings for consumers. EPA found that globally, new products typically [did not cost more than existing ones](#), and some products were actually cheaper to maintain than conventional equipment because of higher efficiencies, product quality and reliability. It's predicted that the same will happen with HFCs 11

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

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_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

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

11 <https://www.wri.org/blog/2015/03/reducing-hfcs-us-would-benefit-consumers-and-climate>

12 <https://www.iea.org/news/air-conditioning-use-emerges-as-one-of-the-key-drivers-of-global-electricity-demand-growth>

13 <https://www.epa.gov/ozone-layer-protection/transitioning-low-gwp-alternatives-residential-and-commercial-air>

14 <https://www.ccacoalition.org/en/resources/factsheet-hydrofluorocarbons-key-messages>

HB-2492-HD-2

Submitted on: 2/23/2020 9:46:37 PM

Testimony for FIN on 2/25/2020 12:30:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Sylvia Dolena	Pele Lani Farm LLC	Support	No

Comments:

As one of 350Hawaii.org's 6,000 members, I strongly support HB 2492 HD2.

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

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.

Mahalo,

Sylvia Dolena

HB-2492-HD-2

Submitted on: 2/24/2020 10:10:27 AM

Testimony for FIN on 2/25/2020 12:30:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Joseph Kohn MD	We Are One, Inc. - www.WeAreOne.cc - WAO	Support	No

Comments:

In strong support of HB 2492 HD2

Dear Chair Luke, and members:

As one of 350Hawaii.org's 6,000 members, I strongly support HB 2492 HD2.

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.

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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.

www.WeAreOne.cc

HB-2492-HD-2

Submitted on: 2/23/2020 4:08:50 PM

Testimony for FIN on 2/25/2020 12:30:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Victoria Anderson	Individual	Support	No

Comments:

Please support as strong and proactive a version of HB2492 as possible!

I'm with the Hawaii Climate Protectors Coalition, and we have been informing ourselves about the many and varied solutions to the climate crisis. **Project Drawdown** (a study by over 200 experts from 22 countries over 5 years) reports the reduction of harmful refrigerants as the #1 solution. Because of our climate vulnerability, and because we have shown ourselves to lead other states on important legislation before, Hawai'i should lead the US and the world in changing our refrigerant emissions.

Please pass this important bill!

HB-2492-HD-2

Submitted on: 2/23/2020 9:25:47 PM

Testimony for FIN on 2/25/2020 12:30:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
tlaloc tokuda	Individual	Support	No

Comments:

To: The House Committee on Finance

From: **Tlaloc Tokuda**

Date: Tuesday, February 25, 2020, 12:30 pm

In strong support of HB 2492 HD2

Dear Chair Luke, and members:

As one of 350Hawaii.org's 6,000 members, I strongly support HB 2492 HD2.

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. Mahalo,

Tlaloc Tokuda

Kailua Kona HI 96740

HB-2492-HD-2

Submitted on: 2/23/2020 9:34:57 PM

Testimony for FIN on 2/25/2020 12:30:00 PM

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

Comments:

Dear Chair Takumi, and members:

I strongly support HB 2492 HD2.

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 HD2.

Sincerely,

Noel Morin - Hilo

HB-2492-HD-2

Submitted on: 2/23/2020 9:39:04 PM

Testimony for FIN on 2/25/2020 12:30:00 PM

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

Comments:

HB-2492-HD-2

Submitted on: 2/23/2020 11:08:51 PM

Testimony for FIN on 2/25/2020 12:30:00 PM

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

Comments:

Please support HB 2492 HD2 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-HD-2

Submitted on: 2/24/2020 6:54:34 AM

Testimony for FIN on 2/25/2020 12:30:00 PM

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

Comments:

Dear Chair Luke, and members:

As one of 350Hawaii.org's 6,000 members, I strongly support HB 2492 HD2.

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.

me ke aloha 'Ä• ina,

Nanea Lo

HB-2492-HD-2

Submitted on: 2/24/2020 9:43:59 AM

Testimony for FIN on 2/25/2020 12:30:00 PM

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

Comments:

Dear Chair Luke, and members:

As one of 350Hawaii.org's 6,000 members, I strongly support HB 2492 HD2.

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.

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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.

Thank you

Jerry Riverstone

HB-2492-HD-2

Submitted on: 2/24/2020 12:21:01 PM

Testimony for FIN on 2/25/2020 12:30:00 PM

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

Comments:

HB-2492-HD-2

Submitted on: 2/24/2020 1:50:27 PM

Testimony for FIN on 2/25/2020 12:30:00 PM

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

Comments:

Dear Chair Luke and FIN committtee members,

Our State is doing its best to curb global warming by cutting greenhouse gases. But there are other chemicals that can cause heat in our atmosphere as well, including hydrofluorocarbons (HFCs) which are used as refrigerants. I agree with the idea of phasing out these chemicals from Hawaii and also the need for the Dept of Health to study how to incentivize the use of less toxic refrigerants. Each step to a cleaner, cooler atmosphere makes a difference.

Please pass HB2492.

Thank you,

Jan Pappas

Aiea, Hawaii

HB-2492-HD-2

Submitted on: 2/24/2020 2:24:06 PM

Testimony for FIN on 2/25/2020 12:30:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Cheryl Reeser	Individual	Support	No

Comments:

LATE

HB-2492-HD-2

Submitted on: 2/24/2020 5:52:53 PM

Testimony for FIN on 2/25/2020 12:30:00 PM

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

Comments:

LATE

HB-2492-HD-2

Submitted on: 2/24/2020 9:34:05 PM

Testimony for FIN on 2/25/2020 12:30:00 PM

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

Comments:

Dear Chair Luke, and members:

As one of 350Hawaii.org's 6,000 members, I strongly support HB 2492 HD2.

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.

Mahalo,

Caroline Kunitake

LATE

HB-2492-HD-2

Submitted on: 2/24/2020 9:36:57 PM

Testimony for FIN on 2/25/2020 12:30:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Zoe Malia Ozoa Loos	Individual	Support	No

Comments:

To: The House Committee on Finance

From: **ZOE**

Date: Tuesday, February 25, 2020, 12:30 pm

In strong support of HB 2492 HD2

Dear Chair Luke, and members:

As one of 350Hawaii.org's 6,000 members, I strongly support HB 2492 HD2.

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.

ZOE

P.S. I know this is the type of testimony that you all get a lot, one where it would be better to put our own personal touch on it. I would love to, but there are so many of us where this is all we can muster with hectic schedules and trying to do our best. I just want you to know that while I may have not crafted my own response that does not mean I do not 100000000 percent agree with what is being said and that we NEED action. We need the government to do its job while we do ours.

Mahalo for your hard work!

LATE

HB-2492-HD-2

Submitted on: 2/24/2020 10:41:23 PM

Testimony for FIN on 2/25/2020 12:30:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Ted Bohlen	Individual	Support	No

Comments:

Refrigerants often use hydrofluorocarbons (HFCs), which are extremely potent greenhouse gases. In fact, Paul Hawken's Project Drawdown scientific analysis ranked HFCs as the #1 of its 100 most effective solutions to reversing global warming by 2050! The federal government is not able to pass a law, so states need to do so in order to prevent emissions of these harmful greenhouse gases. States such as California, Washington, and Vermont have already done so. Please help to begin reversing the climate crisis by passing this bill. Mahalo!

LATE

HB-2492-HD-2

Submitted on: 2/25/2020 1:21:23 AM

Testimony for FIN on 2/25/2020 12:30:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Jeremy Garrett	Individual	Support	No

Comments:

Where lower global warming potential alternatives exist, it is urgent that they be implemented and incentivized. Please pass this measure.

LATE

HB-2492-HD-2

Submitted on: 2/25/2020 9:50:34 AM

Testimony for FIN on 2/25/2020 12:30:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Juanita Kawamoto Brown	Individual	Support	No

Comments:

LATE

HB-2492-HD-2

Submitted on: 2/25/2020 10:01:40 AM

Testimony for FIN on 2/25/2020 12:30:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Severine Busquet	Individual	Support	No

Comments:

Aloha

Project Drawdown (a study by over 200 experts from 22 countries over 5 years) reports the reduction of harmful refrigerants as the first solution to reverse climate changes. Meaning, it is the most efficient way to reduce our impact on the environment.

For this reason, I strongly support HB2492 HD2.

Thanks for your attention

Severine Busquet

Hawaii Kai, Honolulu

LATE

HB-2492-HD-2

Submitted on: 2/25/2020 10:31:04 AM

Testimony for FIN on 2/25/2020 12:30:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Katherine Ray	Individual	Support	No

Comments:

Dear Chair Luke, and members:

I strongly support HB 2492 HD2.

Though carbon dioxide is the main culprit in global warming because its prevalence, other gases also trap heat in the atmosphere and are far more potent if less prevalent.

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.

Even though we need to concentrate on decreasing CO2 and methane emissions, we also must identify a path to 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.

-Katherine Ray