



STATE OF HAWAII
DEPARTMENT OF HEALTH
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In reply, please refer to:
File:

**Testimony in SUPPORT of HB0197 HD1
RELATING TO CLIMATE CHANGE MITIGATION**

REPRESENTATIVE MARK M. NAKASHIMA, CHAIR
HOUSE COMMITTEE ON CONSUMER PROTECTION & COMMERCE
Hearing Date: 2/16/2023 Room Number: 329

1 **Fiscal Implications:** This measure may impact the priorities identified in the Governor's
2 Executive Budget Request for the Department of Health's (Department) appropriations and
3 personnel priorities. This measure will increase demand on the Department's resources.
4

5 **Department Testimony:** The Department supports this bill that proposes to establish a new
6 Refrigerant Management Program within the Department to reduce Hydrofluorocarbon (HFC)
7 emissions from refrigerants that impact climate change.

8 The U.S. Environmental Protection Agency (EPA) phased out the production and import
9 of chlorofluorocarbons and most hydrochlorofluorocarbons, commonly used as refrigerants,
10 because of their potential to deplete the upper ozone layer. HFCs became replacements for these
11 ozone depleting substances (ODS). However, it was later found that some types of HFCs are
12 potent greenhouse gases with very high global warming potentials (GWPs) contributing to
13 climate change. On December 27, 2020, the American Innovation and Manufacturing Act was
14 enacted by Congress directing EPA to phase out the use of HFCs by 85% over the next 15 years.
15 EPA is currently developing rules to support the transition to less damaging HFCs or suitable
16 alternatives.

17 As part of the transition to low-GWP alternatives, systems using these compounds must
18 be carefully managed to minimize the impacts on our environment. This measure would help
19 prevent the emissions of high-GWP HFCs by establishing a Hawaii Refrigerant Management
20 Program to include registration, leak inspection, repair, and reporting from large capacity

1 refrigeration systems and service practices for the installation, servicing, and disposal of
2 refrigeration and air conditioning systems that use high-GWP refrigerants. Legacy ozone
3 depleting substances will also be subject to these requirements.

4 This bill aligns with many of Hawaii's climate change goals and priorities and would
5 move Hawaii forward in an area that complements and enhances federal action.

6 Thank you for the opportunity to testify.

7 **Offered Amendments:** None.



STATE OF HAWAII
HAWAII CLIMATE CHANGE MITIGATION & ADAPTATION
COMMISSION
POST OFFICE BOX 621
HONOLULU, HAWAII 96809

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**Testimony of
Leah Laramee
Coordinator, Hawai'i Climate Change Mitigation and Adaptation Commission**

**Before the House Committee on
CONSUMER PROTECTION & COMMERCE**

**Thursday, February 16, 2023
2:00 PM**

State Capitol, Via Videoconference, Conference Room 329

**In support of
House Bill 197 House Draft 1
RELATING TO CLIMATE CHANGE MITIGATION**

House Bill 197 HD1 Requires the department of health to establish a refrigerant management program to reduce emissions of high global warming potential refrigerants and any refrigerant that is an ozone depleting substance from operation of stationary, commercial, and industrial refrigeration equipment responsible and adopt rules for the regulation of the use of such refrigerants. Requires the state building code council to establish codes and standards consistent with the goal of reducing greenhouse gas emissions associated with hydrofluorocarbons when updating the state building code. Specifies that no law, rule, ordinance, or code, including the state building code, shall prohibit or limit the use of a refrigerant deemed acceptable under federal law and appropriates funds. **The Hawai'i Climate Change Mitigation and Adaptation Commission (Commission) supports this measure.**

The Environmental Protection Agency identifies that Hydrofluorocarbons (HFCs) are greenhouse gases (GHGs) have high global warming potential, raising concern about their impacts as they become increasingly used as replacements for ozone-depleting substances. Climate-friendly alternatives are available to replace HFCs while prohibiting certain uses of the most harmful chemical alternatives which are identified in their Significant New Alternatives Policy (SNAP) Program. A Hawai'i refrigerant management program will position the state in a leadership role in phasing out these harmful substances. The Commission supports the measure as an important piece of mitigating global and local climate change.

Mahalo for the opportunity to testify in support of this measure.

HB-197-HD-1

Submitted on: 2/14/2023 8:34:11 PM

Testimony for CPC on 2/16/2023 2:00:00 PM

Submitted By	Organization	Testifier Position	Testify
Paul Bernstein	Hawaii Environmental Change Agents' Decarbonization of Buildings Task Force	Support	Written Testimony Only

Comments:

Aloha Chair Nakashima, Vice Chair Sayama, and Members of the CPC Committee:

On behalf of the Hawai'i Environmental Change Agents' (HECA) Decarbonization of Buildings Task Force, I am submitting testimony in strong support of HB197 HD1. If we are to truly address our greenhouse gas emissions (GHGs), we must address all GHGs: carbon dioxide, methane, nitrous oxide, and high global warming (GWP) gases such as chlorofluorocarbons (CFCs) and hydrofluorocarbons (HFCs), which are more than a thousand times more potent than carbon dioxide when it comes to global warming. As we reduce our emissions of CO2, emissions of high GWP gases will represent a greater and greater share of our GHG emissions. This bill is a necessary part of a package of policies to address our GHG emissions and complements existing acts to reduce other GHGs. This bill addresses the greatest causes of emissions of these gases and paves the way toward a transition of using far less damaging refrigerants

Much scientific analysis has been done on the benefits of reducing global emissions of CFCs and HFCs:

- “Halogenated organic compounds (i.e., CFCs and HFCs) trap much more heat in the atmosphere than most other known compounds. Scientists calculated that one third of global warming during the second half of the 20th century was due to heat trapped by halogenated compounds. (Source: <https://edu.rsc.org/download?ac=503998>)
- “Increasing atmospheric concentrations of CFCs have accounted for about 24% of the direct increase in radiative forcing from greenhouse gases over the last decade.” (Source <https://experts.illinois.edu/en/publications/the-role-of-refrigerants-in-climate-change>)
- “Avoiding production and use of high-GWP (global warming potential) HFCs by using technologically feasible low-GWP substitutes to meet the increasing global demand can avoid as much as another 0.5 °C warming by the end of the century.” (Source: <https://acp.copernicus.org/articles/13/6083/2013/acp-13-6083-2013.pdf>)

In response to the deleterious effects of HFCs, the international community put forward the Kigali Amendment to the Montreal Protocol. This amendment calls on all countries to reduce

their use of HFCs and could avoid up to half a degree Celsius of global warming by the end of the century. The US has ratified this amendment.

In response to the Kigali Amendment and the long standing need to take action against HFCs, the US Federal government included in the American Innovation and Manufacturing (AIM) Act provisions to address HFCs. HB197 HD1 is consistent with the goals of this Act and will push Hawaii do its part in helping the US meet its obligations under the Kigali Amendment.

HB197 would prepare the State to address significant causes of high greenhouse gas refrigerants escaping into the atmosphere. Please pass this bill.

Respectfully,

Paul Bernstein

Chair of HECA's Decarbonization of Buildings Task Force



To: The Honorable Chair Mark Nakashima, the Honorable Vice Chair Jackson Sayama, and Members of the Committee on Consumer Protection and Commerce

From: Climate Protectors Hawai'i (by Ted Bohlen)

Re: **Hearing HB197 HD1 RELATING TO CLIMATE CHANGE MITIGATION**

Hearing: Thursday February 16, 2023, 2:00 p.m., room 329

Aloha Chair Nakashima, Vice Chair Sayama, and Members of the Committee on Consumer Protection and Commerce:

Climate Protectors Hawai'i STRONGLY SUPPORT HB197 HD1.

The Climate Protectors Hawai'i seek to educate and engage the local community in climate change action, to help Hawai'i show the world the way back to a safe and stable climate.

Hydrofluorocarbons (HFCs) are chemicals commonly used in air conditioning, refrigeration, and insulating foam and as propellants. HFCs were designed to replace ozone depleting substances that were harming the planet's protective ozone layer. However, HFCs are now acting as greenhouse gases that can have very high global warming potentials that are thousands of times more potent

than carbon dioxide in contributing to climate change. If HFCs continue to be used, it is estimated that they could account for up to twenty per cent of global greenhouse gas emissions by 2050.

California has implemented a successful refrigerant management program to monitor and reduce emissions of refrigerants with high global warming potential and ozone depleting substances. A similar state level refrigerant management program in Hawaii would support state greenhouse gas reduction goals and prevent leakage of these harmful chemicals into the atmosphere.

This bill addresses the most significant causes of refrigerants escaping into the atmosphere by establishing a DOH refrigerant management program that:

- Requires registration and regular leak inspections and reporting for commercial and industrial stationary refrigeration systems that are not equipped with automatic leak detection; and
- Requires service practices for the installation, servicing, repair, and disposal of stationary refrigeration and air conditioning systems that use high global warming potential or ozone depleting substance refrigerants.

This bill will go a long way toward reducing emissions. Please pass this bill!

Mahalo for providing the opportunity to testify!

Climate Protectors Hawai'i (by Ted Bohlen)



To: The House Committee on Consumer Protection & Commerce (CPC)
From: Sherry Pollack, 350Hawaii.org
Date: Thursday, February 16, 2023, 2:00pm

In support of HB197 HD1

Aloha Chair Nakashima, Vice Chair Sayama, and Consumer Protection & Commerce Committee members,

I am Co-Founder of the Hawaii chapter of 350.org, the largest international organization dedicated to fighting climate change. 350Hawaii.org **supports HB197 HD1** that requires the department of health to establish a refrigerant management program to reduce emissions of high global warming potential refrigerants and any refrigerant that is an ozone depleting substance from operation of stationary, commercial, and industrial refrigeration equipment responsible and adopt rules for the regulation of the use of such refrigerants. In addition, this measure requires the state building code council to establish codes and standards consistent with the goal of reducing greenhouse gas emissions associated with hydrofluorocarbons when updating the state building code.

One of the biggest sources of emissions of refrigerants is from leakage, mishandling, and improper disposal. This measure would support state greenhouse gas reduction goals and prevent leakage of these harmful chemicals into the atmosphere.

Please support and pass this important measure.

Mahalo for the opportunity to testify.

Sherry Pollack
Co-Founder, 350Hawaii.org

HB-197-HD-1

Submitted on: 2/14/2023 12:21:00 AM

Testimony for CPC on 2/16/2023 2:00:00 PM

Submitted By	Organization	Testifier Position	Testify
Clair Mason	Individual	Support	Written Testimony Only

Comments:

Aloha chair, vice chair, and members of the committee,

My name is Clair Mason, I am from Kailua-Kona, and I stand in **strong support of HB197**. We are failing to catch up to our climate deadlines. We must all do our part to battle climate change so that the aftermath doesn't fall in the shoulders of our keiki. Please pass HB197 to end the use of mass refrigerants in Hawai'i. Mahalo for your work and for considering my testimony.

Clair Mason

HB-197-HD-1

Submitted on: 2/14/2023 2:40:12 PM

Testimony for CPC on 2/16/2023 2:00:00 PM

Submitted By	Organization	Testifier Position	Testify
Caroline Azelski	Individual	Support	Written Testimony Only

Comments:

In support of HD1. Thank you.

HB-197-HD-1

Submitted on: 2/14/2023 2:58:18 PM

Testimony for CPC on 2/16/2023 2:00:00 PM

Submitted By	Organization	Testifier Position	Testify
Noel Morin	Individual	Support	Written Testimony Only

Comments:

Dear Chair Nakashima, Vice Chair Sayama, and Committee members,
I SUPPORT HB197 HD1.

Sincerely,

Noel Morin

Climate, Sustainability, and Resilience Advocate

Hilo

HB-197-HD-1

Submitted on: 2/14/2023 5:37:42 PM

Testimony for CPC on 2/16/2023 2:00:00 PM

Submitted By	Organization	Testifier Position	Testify
Douglas Perrine	Individual	Support	Written Testimony Only

Comments:

HB197 should be passed for the protection of our environment.

HB-197-HD-1

Submitted on: 2/14/2023 9:04:46 PM

Testimony for CPC on 2/16/2023 2:00:00 PM

Submitted By	Organization	Testifier Position	Testify
Matthew Geyer	Individual	Support	In Person

Comments:

Thank you for hearing HB197, which establishes a program that reduces global warming emissions from air conditioning and refrigeration.

Please support this measure as we need to do everything we can to reduce these toxic emissions.

Matthew Geyer

HB-197-HD-1

Submitted on: 2/15/2023 8:02:44 AM

Testimony for CPC on 2/16/2023 2:00:00 PM

Submitted By	Organization	Testifier Position	Testify
Ruta Jordans	Individual	Support	Written Testimony Only

Comments:

Please support HB197 for our children and their children!

This bill addresses the most significant causes of refrigerants escaping into the atmosphere by establishing a refrigerant management program that:

- Requires registration and regular leak inspections and reporting for commercial and industrial stationary refrigeration systems that are not equipped with automatic leak detection;
- Requires service practices for the installation, servicing, repair, and disposal of stationary refrigeration and air conditioning systems that use high global warming potential or ozone depleting substance refrigerants.

Much scientific analysis has been done on the benefits of reducing global emissions of CFCs and HFCs:

- “Halogenated organic compounds (i.e., CFCs and HFCs) trap much more heat in the atmosphere than most other known compounds. Scientists calculated that one third of global warming during the second half of the 20th century was due to heat trapped by halogenated compounds. (Source: <https://edu.rsc.org/download?ac=503998>)
- “Increasing atmospheric concentrations of CFCs have accounted for about 24% of the direct increase in radiative forcing from greenhouse gases over the last decade.” (Source <https://experts.illinois.edu/en/publications/the-role-of-refrigerants-in-climate-change>)
- “Avoiding production and use of high-GWP (global warming potential) HFCs by using technologically feasible low-GWP substitutes to meet the increasing global demand can avoid as much as another 0.5 °C warming by the end of the century.” (Source: <https://acp.copernicus.org/articles/13/6083/2013/acp-13-6083-2013.pdf>)

HB-197-HD-1

Submitted on: 2/15/2023 9:04:14 AM

Testimony for CPC on 2/16/2023 2:00:00 PM

Submitted By	Organization	Testifier Position	Testify
Barbara Best	Individual	Support	Written Testimony Only

Comments:

Of course we should reduce emissions and spell out how in as many areas as possible

HB-197-HD-1

Submitted on: 2/15/2023 2:58:27 PM

Testimony for CPC on 2/16/2023 2:00:00 PM

Submitted By	Organization	Testifier Position	Testify
laurel brier	Kauai climate action coalition	Support	Written Testimony Only

Comments:

Refrigerants are a substantial contributor to our GHG emissions and the climate crisis. They are leaking into our atmosphere and need to be regulated. A plan for disposal is of dire importance. A very important low hanging fruit the legislature can and should address this session. Mahalo