

HAWAII STATE ENERGY OFFICE STATE OF HAWAII

235 South Beretania Street, 5th Floor, Honolulu, Hawaii 96813 Mailing Address: P.O. Box 2359, Honolulu, Hawaii 96804 Telephone: Web: (808) 587-3807 energy.hawaii.gov

Testimony of MARK B. GLICK, Chief Energy Officer

before the SENATE COMMITTEE ON AGRICULTURE AND ENVIRONMENT

Monday, January 30, 2023 2:00 PM State Capitol, Conference Room 224 and Videoconference

Provides COMMENTS on **SB 506**

RELATING TO CONSUMER PROTECTION.

Chair Gabbard, Vice Chair Richards, and Members of the Committee, the Hawaii State Energy Office (HSEO) supports the intent of SB 506 which requires self-service stations to put labels on gas dispensing equipment that advise consumers on the effects of fossil fuel consumption to human health and the environment.

HSEO appreciates increasing public awareness of the harmful effects of the burning of fossil fuels on human health and the environment with a desired outcome of decreased fossil fuel usage which supports the State's clean energy goals. HSEO understands the effectiveness of the measure is subject to having an independent third party with a nexus to retail gas dispensing to efficiently administer the program.

Thank you for the opportunity to testify.

JOSH GREEN, M.D. GOVERNOR

CHIEF ENERGY OFFICER

MARK B. GLICK



To: The Honorable Senator Mike Gabbard, Chair, the Honorable Tim Richards, III, Vice Chair, and Members of the Committee on Agriculture and Environment.

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

Re: Hearing SB506 RELATING TO CONSUMER PROTECTION

Hearing: Monday January 30, 2023 2:00 p.m.

Aloha Chair Gabbard , Vice Chair Richards, and Agriculture and Environment Committee Members:

The mission of the Climate Protectors Hawai'i is 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.

The Climate Protectors Hawai'i STRONGLY SUPPORTS SB506!

SB506 would require retail self-service stations to have warning labels on gas dispensing equipment that advise consumers that burning gasoline, diesel, and ethanol has major consequences on human health and the environment, including its contribution to climate change. Burning these fossil fuels releases pollutants that are warming the planet, resulting in more intense storms, sea level rise, floods, droughts, and fires, among numerous dire consequences.

Gasoline often includes toxic additives such as benzene, toluene and xylene. Burning gasoline, diesel, and ethanol can lead to early death, heart attacks, respiratory disorders, stroke, asthma, autism spectrum disorder, and Alzheimers's disease.

Consumers should be warned at the pump that burning gasoline, diesel, and ethanol has major consequences on human health and the environment.

Please protect consumers by passing this important bill!

Mahalo!

Climate Protectors Hawai'i (by Ted Bohlen)

Dear Senators,

I work for the NGO *Green Mobilists Sweden*, which campaigns for eco-labels with climate impact rating on fuel pumps and charging stations. In fall 2021, such eco-labels <u>became mandatory</u> all across Sweden. A few months before that, climate and health warning labels <u>were placed</u> on all gas pumps in Cambridge, MA. These are the world's first labelling schemes of this kind.

To help shift attitudes to fossil fuels, and contribute to behaviour change, these labels must be disseminated widely.

Placing climate and health warning labels on gas pumps across Hawai'i according to bill SB506 would be a major step forward. As the first mandatory such labels at state level, they would attract considerable attention, which would increase the odds of this idea spreading to other states – and to more countries.

Information and warnings relating to climate and health at the point of sale of fossil fuels will help breaking the normality of filling our cars with gasoline or diesel, just like information and warnings on cigarette packages helped breaking the normality of smoking.

Seeing warnings or alarming information at the gas pump also helps bridging the gap between abstract long-term threats and the choices we make here and now. That may catalyse behaviour changes.

Of course, many more measures and regulations than warning labels are needed to end the fossil fuel era. However, as renowned environmental psychologists and public health professors wrote in an <u>op-ed in BMJ</u> about the matter:

"Although individual action alone is insufficient to achieve the aims of the Paris Agreement, it is critical."

References

BMJ, March 31, 2020: *We need health warning labels on points of sale of fossil fuels* <u>https://blogs.bmj.com/bmj/2020/03/31/we-need-health-warning-labels-on-points-of-sale-of-fossil-fuels/</u>

The Guardian, December 25, 2020: *Massachusetts city to post climate change warning stickers at gas stations* <u>https://www.theguardian.com/us-news/2020/dec/25/massachusetts-city-to-post-climate-change-warning-stickers-at-gas-stations</u>

The Guardian, October 1, 2021: Swedish fuel retailers required to display eco-labels at pumps <u>https://www.theguardian.com/world/2021/oct/01/swedish-fuel-retailers-required-to-display-eco-labels-at-pumps</u>

Best regards,

Per Östborn

Campaign Manager, Green Mobilists Sweden

(The Swedish Association of Green Motorists)

+46 (0)73 819 61 54, per.ostborn@gronamobilister.se

<u>SB-506</u> Submitted on: 1/28/2023 4:13:28 PM Testimony for AEN on 1/30/2023 2:00:00 PM

Submitted By	Organization	Testifier Position	Testify
LIBRADO COBIAN	Testifying for AAC	Oppose	Remotely Via Zoom

Comments:

My name is Li Cobian I am a DOD Environmental Contractor Professional of 35 years with a extensive background of hazardous materials and environmental contamination of land, air, and water.

The subject of "Climate Change" or its definition is not a scientific term with any proven contribution origins. It used to be "Global Warming" but after record snow systems it was changed to "Climate Change". The Climate is always changing. There is no proven or disproven contribution source that makes the "climate change " from one way to another. Every opinion can be disputed. And the Ocean is NOT Boiling, like the privet jet flying (mega ton CO2 Spewing) jet setter, Al Gore said at the World Economic Forum.

This is a campaign to promote Electric cars under the un-proven claim that fossil fuels can change the climate of the earth and EV's are better for the environment . The cause of " Climate Change " is neither proven nor unproven . It's only a Partison opinion or a theory at best taught promoted by GOOGLE's preferred and approved scientists and at our schools today by liberal arts teachers .

It is scientifically proven by World Atlas and a fact that the manufacturing process of Batteries entailes the top three most Polluting industries on the planet .

1 Used Lead-Acid Batteries (ULAB):

2 Mining and Ore Processing. And

3 Lead Smelting:

Regardless if is Lead, Lithium, Cadnium, Sodium Sulfer or other minerals . Also the mining of these mineral ores are produced from the most Environmentally wreckless and polluting and corrupt countries in the world that uses child labor to mine these minerals .

Think of this, when was the last time you saw a child in a hard hat drilling for oil.

This labeling is a campaign to promote Electric cars under the un-proven claim that fossil fuels can change the climate of the earth and EV's are better and will save the environment. The source affects of " Climate Change " is neither proven nor unproven . It's only a Partison opinion or a theory at best. For this reason I oppose this labeling because it forces a retailer to promote a partisan opinion that they may disagree with .

This bill is a campaign to demonize people who still prefer the use gas cars, because the same people who want such labeling would NEVER ever support the same label at EV Charging stations warning EV users that the EV battery in their vehicle is produced through the top 3 most polluting industry on the planet and the mining of it's materials pollutes the environment and comes from the most currupt contries that use child slave labor to obtain the minerals for the batteries. No they would not , because the purpose of this labeling is to promote EV's , a Partison issue , and a preference being imposed on others that don't want a EV who's battery replacement costs 75% of the MSRP of the vehicle.

The travesty of this, is that todays youth (who hate math and science) are being brainwashed to only see one side and not examine the science of both sides. They refuse to even look at the environmental impact of the production of Batteries. Nothing to see there. Gas Cars BAD ... EV's Good. And as a result they are ploys to frivilous law suits against Hawaii's DOT because these children (with no science knowledge) demand more free EV charging stations at Parking lots, and they refuse and don't care about the Environmental Detriment from the production of the most environmental polluting product..... THE BATTERY. Because the goal is to Promote Electric Cars .

It's that simple. Li Cobian

<u>SB-506</u> Submitted on: 1/27/2023 8:35:51 PM Testimony for AEN on 1/30/2023 2:00:00 PM

Submitted By	Organization	Testifier Position	Testify
Gerard Silva	Individual	Oppose	Written Testimony Only

Comments:

There is no such thing as Fossil Fuel. The Ellits payed for them to Creat this name just to say that it means Fuel is not for ever but this consept is Bulshit. Oil is just like WaterIt will last as long as water will and longer. So do not belive the Bullshit!!!!!

TO:	Members of the Committee on Agriculture and Environment
FROM:	Natalie Iwasa 808-395-3233
HEARING:	2:00 p.m. Monday, January 30, 2023
SUBJECT:	SB 506 – Requiring Labels on Fuel Pumps – OPPOSED

Aloha Chair Gabbard and Committee Members,

Thank you for allowing me the opportunity to provide testimony on SB 506, which would require self-service stations to put labels on their fuel pumps specifying the impact of "fuel consumption."

First of all, someone should rethink the use of the term "consumption."

Second, we don't need any more labels on fuel pumps.

Please work on other issues that are more important.



Board of Directors

Eric Wright President Par Hawaii

Robert Hood Vice President Aloha Petroleum, LLC

Al Chee Vice President & Secretary/Treasurer Island Energy Services, LLC

Kimo Haynes Immediate Past President Hawaii Petroleum, LLC

Casie Bui Aloha Petroleum, LLC

Alton Higa Aloha Petroleum, LLC

> Eric Lee Par Hawaii, LLC

Alec McBarnet Maui Oil Petroleum, LLC

Annie Marszal Lahaina Petroleum

Jon Mauer Island Energy Services, LLC

Paul Oliveira Maui Oil Company, Inc.

> John Peyton Par Hawaii

Steve Wetter Hawaii Petroleum, LLC Testimony of Eric Wright President of the Hawaii Energy Marketers Association (HEMA)

SENATE BILL 506 RELATING TO CONSUMER PROTECTION

SENATE COMMITTEE ON AGRICULTURE AND ENVIRONMENT The Honorable Mike Gabbard, Chair The Honorable Herbert M. "Tim" Richards, III, Vice Chair

> Monday, January 30, 2023 @ 2:00 PM Conference Room 224 & Videoconference

Aloha Chair Gabbard, Vice Chair Richards, and Members of the Committee:

I am Eric Wright, president of the Hawaii Energy Marketers Association (HEMA). HEMA is a nonprofit trade association comprised of members who market motor fuel products and operate convenience stores across the Hawaiian Islands.

Senate Bill 506 requires services stations to affix, bear or attach an environmental warning label at each dispensing gas pump subject to Public Utility Commission approval.

While HEMA appreciates the intent of this measure, we believe this bill is unnecessary because we already have adequate warning labels at dispensing gas pumps. Foremost warning has been the safety of life and property. These include and are not limited to:

- 1. No Smoking
- 2. Turn Off Engine
- 3. Turn Off Cell Phone & Other Electronic Devices
- 4. Fill Portable Containers on the Ground
- 5. Discharge Your Static Electricity Before Fueling
- 6. If a Fire Starts, Do Not Remove Nozzle
- 7. Never Allow Children to Use Pump

However, if the committee is inclined to pass on this measure, we respectfully ask that any warning label be made voluntarily at retail and service station.

Thank you for allowing HEMA the opportunity to submit testimony on this bill.

TESTIMONY OF LEODOLOFF R. ASUNCION, JR. CHAIR, PUBLIC UTILITIES COMMISSION STATE OF HAWAII

TO THE SENATE COMMITTEE ON AGRICULTURE AND ENVIRONMENT

January 30, 2023 2:00 p.m.

Chair Gabbard, Vice Chair Richards, and Members of the Committee:

MEASURE: S.B. No. 506 TITLE: RELATING TO CONSUMER PROTECTION.

DESCRIPTION: Requires self-service stations to put labels on gas dispensing equipment that advise consumers on the effects of fossil fuel consumption to human health and the environment.

POSITION:

The Public Utilities Commission ("Commission") offers the following comments for consideration.

COMMENTS:

The Commission appreciates the intent of this measure to inform users of self-service gas pump dispensing equipment in a retail service station of the human health and environmental impacts of fossil fuel consumption.

However, the Commission requests the Legislature provide necessary clarity on the administration, implementation, and enforcement to effectuate the intent of the proposed legislation.

The Commission observes that there may be required signage on self-service gas pump dispensing equipment as provided in Hawaii State law, including but not limited to, octane content and safety notice on the pump handles. Corporations affiliated with or contracted by service stations may also have requirements to ensure credit card safety and rewards S.B. No. 506 Page 2

signage. County ordinances may also require stations to provide identifying markings per self-service gas pump.

Finally, the Commission notes other agencies may have the relevant expertise on the human health and environmental impacts associated with burning gasoline, diesel, and ethanol, and therefore may be better suited to carry out the duties established in this measure.

Thank you for the opportunity to testify on this measure.

<u>SB-506</u> Submitted on: 1/29/2023 11:59:10 AM Testimony for AEN on 1/30/2023 2:00:00 PM

Submitted By	Organization	Testifier Position	Testify
kalia Naia	Individual	Support	Written Testimony Only

Comments:

I strongy support stopping people from taking fish from Hawaii's reefs for the aquarium

trade. I have seen first hand how much this has affected the reefs in my backyard in South Kohala and the rebound that has happened in recent years. It was horrible to come to the dock and see all the fish these people had "harvested" when we all know how they will also all die a early death if they even MAKE it to the pet stores. It really is nsane to think the destruction this causes to this fragile ecosystem has ever been legal or there is any question at all that it needs to be outlawed forever. It is NOT a good option in any way shape or form to continue to take fish for a few people to make money from taking fish where they are enjoyed by many more people in their natural habitat.

Thank you, Kalia Naia

<u>SB-506</u> Submitted on: 1/29/2023 1:51:18 PM Testimony for AEN on 1/30/2023 2:00:00 PM

Submitted By	Organization	Testifier Position	Testify
James Brooks	Individual	Support	Written Testimony Only

Comments:

Dear Senate Committee on Agriculture and Environment,

I urge the committee to vote yes on SB 506. As some of you may know, the City of Cambridge, MA and the country of Sweden currently have consumer information about public health and climate change posted at gas pumps since 2020 and 2021 respectively. There is an urgent need for consumers to get scienced-based information about the climate and health effects when they buy gas. Climate and health warning labels available at the point of sale are the best time and place to educate consumers about these harms. Consumer knowledge about the health effects and climate effects produced when they consume these fuels is low, and a key component to Hawaii transitioning off fossil fuel, as well as lessening its depeendence on imported fuels, will be through consumer education. Lastly, consumers and global citizens pay **now** the invisible environmental and public health costs from burning gas, and they have a right to know so that they can make better choices.

Mahalo,

James Brooks

<u>SB-506</u> Submitted on: 1/29/2023 3:55:36 PM Testimony for AEN on 1/30/2023 2:00:00 PM

Submitted By	Organization	Testifier Position	Testify
Jack Lucero Fleck	Individual	Support	Written Testimony Only

Comments:

Please support SB506. It seems highly irresponsible to allow the sale of a product which is highly polluting and causing climate chaos without any warning to the public about these effects. I suggest you reference the Intergovernmental Panel on Climate Change as a very solid source for the consequences of using gasoline. Or you could base the warning on legislation approved by the State of Hawaii regarding the need to reduce greenhouse gases.

Thank you for supporting SB143. This is an important step in the move to a clean energy future!

Sincerely,

Jack Lucero Fleck

SB 506 TESTIMONY

To: Senate Committee on Agriculture and Environment Hearing on Jan. 30, 2023 at 2:00 p.m.

From: John Kawamoto

Position: Support

Many products that pose health risks are required to place warning labels on the packaging, such as cigarettes, pharmaceutical drugs, and flammable material. Fossil fuels may be the biggest health risk in human history because they are largely responsible for climate change, which threatens the existence of the human species. Gasoline is one of those fossil fuels, yet there is no requirement to place a warning label on it.

The fossil fuel industry has known for decades that its products are causing climate change. Exxon, for example, has known about climate change since 1977, even before it became a public issue. Yet for decades the fossil fuel industry refused to publicly acknowledge climate change because it knew that demand for its products would decline if the world understood the risks,

With an eye on profits the fossil fuel industry used the same consultants that the tobacco industry used to develop strategies about how to communicate with the public. During this time the fossil fuel industry promoted misinformation about climate so that customers would continue to purchase its products.

It makes sense to place a warning label on gasoline to inform consumers of the threats that it poses and to counter the historic misinformation of the fossil fuel industry. I urge the committee to pass the bill.

<u>SB-506</u> Submitted on: 1/30/2023 7:03:45 AM Testimony for AEN on 1/30/2023 2:00:00 PM

Submitted By	Organization	Testifier Position	Testify
Stylianos Syropoulos	Individual	Support	Written Testimony Only

Comments:

These climate labels can increase individual efficacy (how much people think their actions matter), which could motivate people to use less gasoline (a very common finding in the field of environmental and social psychology). Further, they could signal overaching (governmental and popular) support for this behavior (i.e., a social norm) which is an effective way to persuade people to act proenvironmental, which in this case translates to people using less gasoline. Thus I fully support this endeavor and think it is a helpful measure to implement.

<u>SB-506</u> Submitted on: 1/30/2023 8:55:17 AM Testimony for AEN on 1/30/2023 2:00:00 PM

Submitted By	Organization	Testifier Position	Testify
James Sturz	Individual	Support	Written Testimony Only

Comments:

I think this is an excellent idea. It may not do a lot, but it will do something -- and that is more than nothing.

I urge you to push this through.

<u>SB-506</u> Submitted on: 1/30/2023 7:35:24 AM Testimony for AEN on 1/30/2023 2:00:00 PM

Submitted By	Organization	Testifier Position	Testify
Barak Kamelgard	Testifying for Think Beyond the Pump	Support	Written Testimony Only

Comments:

Thank you for taking the time to listen to comments on SB143 today. My name is Barak Kamelgard. I am a Director of the non-profit Think Beyond the Pump, as well as an attorney who has researched and written about the legal implications of these types of warning labels.

Hawaii should adopt SB143 and require self-service gas stations to put labels on gas dispensing equipment that advise consumers on the effects of fossil fuel consumption to human health and the environment. The state is particularly vulnerable to the impacts of climate change, including sea level rise, coastal erosion, and more frequent and severe storms. These impacts threaten Hawaii's economy, infrastructure, and natural resources, and can have a significant impact on the health and well-being of its residents. By placing climate change warnings on gas station pumps, Hawaii can raise awareness about the urgent need to reduce greenhouse gas emissions and transition to cleaner forms of energy, and encourage individuals and businesses to take action to reduce their own carbon footprint. Additionally, Hawaii has committed to reducing its dependence on fossil fuels and reducing greenhouse gas emissions. Requiring self-service gas stations to label their equipment with information on the effects of fossil fuel consumption aligns with these goals and demonstrates the state's commitment to sustainability. By highlighting the specific impacts of climate change that Hawaii is facing, these warnings can help to increase political pressure on local and national leaders to take more meaningful action to address the crisis.

Moreover, there are several reasons why climate change warnings are a good idea and an important step forward:

1. Labels have transparency: Labels on gas dispensing equipment would provide clear and transparent information to consumers about the environmental impact of their fuel choices. This would allow consumers to make more informed decisions about their energy consumption and support the transition to cleaner energy sources.

2. Gasoline combustion carries invisible costs: The emissions from gasoline combustion, such as carbon dioxide and other greenhouse gases, contribute to climate change and other environmental harms, such as air pollution, which can lead to negative health impacts such as respiratory diseases and cancer. These costs are often invisible to consumers, but they are real and significant. These invisible costs are not reflected in the price of gasoline and many consumers are unaware of the harms caused by their energy consumption. Labels on gas dispensing equipment would help to make these invisible costs more visible.

3. Consumers have a poor understanding of what the harms are: Many consumers are not aware of the full extent of the harms caused by gasoline combustion. Labels on gas dispensing equipment would help to educate consumers about the environmental impact of their choices and increase their awareness of the harms caused by their energy consumption, thereby helping them make more informed decisions.

4. Consumers have a right to know: Consumers have a right to know about the environmental impact of the products they are purchasing. Climate change warnings on gas station pumps would provide them with this important information and empower consumers to make more sustainable choices.

5. Labels make sense because people will need better education in order for Hawaii to switch to electric vehicles: The transition to electric vehicles will require significant changes in consumer behavior and education. Education and awareness are crucial for the success of this transition. In order for Hawaii to successfully transition to electric vehicles, consumers need to be educated about the environmental benefits of electric vehicles and the harms caused by gasoline combustion. Climate change warnings on gas station pumps would be an important tool in this process. By placing climate change warnings on gas station pumps, consumers can be reminded of the need to consider alternative transportation options and make more environmentally-conscious choices. Moreover, by highlighting the negative effects of fossil fuel consumption, labeling gas dispensing equipment could encourage consumers to explore alternative fuel options, such as electric vehicles, which would further reduce the state's dependence on fossil fuels.

6. Consumers play a crucial role in determining the success of the transition to electric vehicles: The success of the transition to electric vehicles will depend on consumer behavior and choices. By making informed decisions and choosing to invest in electric vehicles, consumers can help drive the demand for and development of these vehicles. Climate change warnings on gas station pumps can serve as a reminder of the importance of these choices.

In conclusion, please adopt SB143 and take the first step forward towards a cleaner, greener economy in Hawaii.

Thank you very much for your time.

Angela Crumpton

From:James Brooks <puppa4014@gmail.com>Sent:Monday, January 30, 2023 8:00 AMTo:AEN CommitteeSubject:Support for SB 506

CAUTION: This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.



January 30, 2023

Senate Committee on Agriculture and the Environment State of Hawa'i

Dear Chairperson Mike Gabbard,

I write in support of Senate Bill 143 mandating public health and climate change information labels on all gas pumps in Hawai'i. As a public health communication expert, I can testify to the important effect that well-constructed labeling programs can have in shifting consumer preferences. In the case of gasoline and diesel, consumers need and have a right to know science-based information about the immediate health harms and long-term climate harms caused by burning fossil fuels. The public health and climate change message proposed in SB 143 will help educate all Hawaiians who purchase gasoline and diesel about the pernicious effects of using these products.

Effective public health communication campaigns feature *simple, clear, relevant messages, repeated often, by a variety of trusted sources.* The pump label proposed in SB 143 will support Hawaii's stated goals of moving toward an electrified transportation system. Moreover, it will do so in a completely non-coercive manner, through education.

A State of Hawai'i warning label at the gas pump is both a science-based and a common-sense measure that can help the people of Hawai'i protect their health and the health of our climate.

Mahalo nui loa for this pioneering legislation,

Edward Mailach

Edward Maibach, MPH, PhD Mason Distinguished University Professor and Director George Mason University Center for Climate Change Communication Fellow, American Association for the Advancement of Science Member, National Academy of Medicine

<u>SB-506</u> Submitted on: 1/30/2023 11:52:44 AM Testimony for AEN on 1/30/2023 2:00:00 PM

Submitted By	Organization	Testifier Position	Testify
Raymond Pajek	Individual	Support	Written Testimony Only

Comments:

I support this legislation because there is no current guardrail for this product, and because there is a growing opportunity for consumers to switch to gas-free transportation. There are many used vehicles currently on sale in the ranges that suits all income earners (Nissan Leafs for \$3,000, or Tesla Model 3's for \$20,000), so it should be feasible now for consumers to begin thinking about safer options for driving. (65% or more of car buyers buy used vehicles and there's a growing amount of EV's on the second hand market) Even if a driver were to be encouraged to move to a Prius, that would be a great start. (A high-performance Tacoma gets 15mpg and a Prius-C gets about 55mpg) Second, I think that there are tremendous risks to our vulnerable, disadvantaged residents who have no choice but to live adjacent to highways and high-traffic roadways, and who have children that are afflicted with asthma and other health concerns. Burning gasoline is both a current health danger to these communities, as it is a longer term risk for our environment due to climate change.



HAWAII STATE ENERGY OFFICE STATE OF HAWAII

235 South Beretania Street, 5th Floor, Honolulu, Hawaii 96813 Mailing Address: P.O. Box 2359, Honolulu, Hawaii 96804 Telephone: Web: (808) 587-3807 energy.hawaii.gov

Testimony of MARK B. GLICK, Chief Energy Officer

before the SENATE COMMITTEE ON AGRICULTURE AND ENVIRONMENT

Monday, January 30, 2023 2:00 PM State Capitol, Conference Room 224 and Videoconference

Provides COMMENTS on **SB 506**

RELATING TO CONSUMER PROTECTION.

Chair Gabbard, Vice Chair Richards, and Members of the Committee, the Hawaii State Energy Office (HSEO) supports the intent of SB 506 which requires self-service stations to put labels on gas dispensing equipment that advise consumers on the effects of fossil fuel consumption to human health and the environment.

HSEO appreciates increasing public awareness of the harmful effects of the burning of fossil fuels on human health and the environment with a desired outcome of decreased fossil fuel usage which supports the State's clean energy goals. HSEO understands the effectiveness of the measure is subject to having an independent third party with a nexus to retail gas dispensing to efficiently administer the program.

Thank you for the opportunity to testify.

JOSH GREEN, M.D. GOVERNOR

CHIEF ENERGY OFFICER

MARK B. GLICK



To: The Honorable Senator Mike Gabbard, Chair, the Honorable Tim Richards, III, Vice Chair, and Members of the Committee on Agriculture and Environment.

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

Re: Hearing SB506 RELATING TO CONSUMER PROTECTION

Hearing: Monday January 30, 2023 2:00 p.m.

Aloha Chair Gabbard , Vice Chair Richards, and Agriculture and Environment Committee Members:

The mission of the Climate Protectors Hawai'i is 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.

The Climate Protectors Hawai'i STRONGLY SUPPORTS SB506!

SB506 would require retail self-service stations to have warning labels on gas dispensing equipment that advise consumers that burning gasoline, diesel, and ethanol has major consequences on human health and the environment, including its contribution to climate change. Burning these fossil fuels releases pollutants that are warming the planet, resulting in more intense storms, sea level rise, floods, droughts, and fires, among numerous dire consequences.

Gasoline often includes toxic additives such as benzene, toluene and xylene. Burning gasoline, diesel, and ethanol can lead to early death, heart attacks, respiratory disorders, stroke, asthma, autism spectrum disorder, and Alzheimers's disease.

Consumers should be warned at the pump that burning gasoline, diesel, and ethanol has major consequences on human health and the environment.

Please protect consumers by passing this important bill!

Mahalo!

Climate Protectors Hawai'i (by Ted Bohlen)

Dear Senators,

I work for the NGO *Green Mobilists Sweden*, which campaigns for eco-labels with climate impact rating on fuel pumps and charging stations. In fall 2021, such eco-labels <u>became mandatory</u> all across Sweden. A few months before that, climate and health warning labels <u>were placed</u> on all gas pumps in Cambridge, MA. These are the world's first labelling schemes of this kind.

To help shift attitudes to fossil fuels, and contribute to behaviour change, these labels must be disseminated widely.

Placing climate and health warning labels on gas pumps across Hawai'i according to bill SB506 would be a major step forward. As the first mandatory such labels at state level, they would attract considerable attention, which would increase the odds of this idea spreading to other states – and to more countries.

Information and warnings relating to climate and health at the point of sale of fossil fuels will help breaking the normality of filling our cars with gasoline or diesel, just like information and warnings on cigarette packages helped breaking the normality of smoking.

Seeing warnings or alarming information at the gas pump also helps bridging the gap between abstract long-term threats and the choices we make here and now. That may catalyse behaviour changes.

Of course, many more measures and regulations than warning labels are needed to end the fossil fuel era. However, as renowned environmental psychologists and public health professors wrote in an <u>op-ed in BMJ</u> about the matter:

"Although individual action alone is insufficient to achieve the aims of the Paris Agreement, it is critical."

References

BMJ, March 31, 2020: *We need health warning labels on points of sale of fossil fuels* <u>https://blogs.bmj.com/bmj/2020/03/31/we-need-health-warning-labels-on-points-of-sale-of-fossil-fuels/</u>

The Guardian, December 25, 2020: *Massachusetts city to post climate change warning stickers at gas stations* <u>https://www.theguardian.com/us-news/2020/dec/25/massachusetts-city-to-post-climate-change-warning-stickers-at-gas-stations</u>

The Guardian, October 1, 2021: Swedish fuel retailers required to display eco-labels at pumps <u>https://www.theguardian.com/world/2021/oct/01/swedish-fuel-retailers-required-to-display-eco-labels-at-pumps</u>

Best regards,

Per Östborn

Campaign Manager, Green Mobilists Sweden

(The Swedish Association of Green Motorists)

+46 (0)73 819 61 54, per.ostborn@gronamobilister.se

<u>SB-506</u> Submitted on: 1/28/2023 4:13:28 PM Testimony for AEN on 1/30/2023 2:00:00 PM

Submitted By	Organization	Testifier Position	Testify
LIBRADO COBIAN	Testifying for AAC	Oppose	Remotely Via Zoom

Comments:

My name is Li Cobian I am a DOD Environmental Contractor Professional of 35 years with a extensive background of hazardous materials and environmental contamination of land, air, and water.

The subject of "Climate Change" or its definition is not a scientific term with any proven contribution origins. It used to be "Global Warming" but after record snow systems it was changed to "Climate Change". The Climate is always changing. There is no proven or disproven contribution source that makes the "climate change " from one way to another. Every opinion can be disputed. And the Ocean is NOT Boiling, like the privet jet flying (mega ton CO2 Spewing) jet setter, Al Gore said at the World Economic Forum.

This is a campaign to promote Electric cars under the un-proven claim that fossil fuels can change the climate of the earth and EV's are better for the environment . The cause of " Climate Change " is neither proven nor unproven . It's only a Partison opinion or a theory at best taught promoted by GOOGLE's preferred and approved scientists and at our schools today by liberal arts teachers .

It is scientifically proven by World Atlas and a fact that the manufacturing process of Batteries entailes the top three most Polluting industries on the planet .

1 Used Lead-Acid Batteries (ULAB):

2 Mining and Ore Processing. And

3 Lead Smelting:

Regardless if is Lead, Lithium, Cadnium, Sodium Sulfer or other minerals . Also the mining of these mineral ores are produced from the most Environmentally wreckless and polluting and corrupt countries in the world that uses child labor to mine these minerals .

Think of this, when was the last time you saw a child in a hard hat drilling for oil.

This labeling is a campaign to promote Electric cars under the un-proven claim that fossil fuels can change the climate of the earth and EV's are better and will save the environment. The source affects of " Climate Change " is neither proven nor unproven . It's only a Partison opinion or a theory at best. For this reason I oppose this labeling because it forces a retailer to promote a partisan opinion that they may disagree with .

This bill is a campaign to demonize people who still prefer the use gas cars, because the same people who want such labeling would NEVER ever support the same label at EV Charging stations warning EV users that the EV battery in their vehicle is produced through the top 3 most polluting industry on the planet and the mining of it's materials pollutes the environment and comes from the most currupt contries that use child slave labor to obtain the minerals for the batteries. No they would not , because the purpose of this labeling is to promote EV's , a Partison issue , and a preference being imposed on others that don't want a EV who's battery replacement costs 75% of the MSRP of the vehicle.

The travesty of this, is that todays youth (who hate math and science) are being brainwashed to only see one side and not examine the science of both sides. They refuse to even look at the environmental impact of the production of Batteries. Nothing to see there. Gas Cars BAD ... EV's Good. And as a result they are ploys to frivilous law suits against Hawaii's DOT because these children (with no science knowledge) demand more free EV charging stations at Parking lots, and they refuse and don't care about the Environmental Detriment from the production of the most environmental polluting product..... THE BATTERY. Because the goal is to Promote Electric Cars .

It's that simple. Li Cobian



Board of Directors

Eric Wright President Par Hawaii

Robert Hood Vice President Aloha Petroleum, LLC

Al Chee Vice President & Secretary/Treasurer Island Energy Services, LLC

Kimo Haynes Immediate Past President Hawaii Petroleum, LLC

Casie Bui Aloha Petroleum, LLC

Alton Higa Aloha Petroleum, LLC

> Eric Lee Par Hawaii, LLC

Alec McBarnet Maui Oil Petroleum, LLC

Annie Marszal Lahaina Petroleum

Jon Mauer Island Energy Services, LLC

Paul Oliveira Maui Oil Company, Inc.

> John Peyton Par Hawaii

Steve Wetter Hawaii Petroleum, LLC Testimony of Eric Wright President of the Hawaii Energy Marketers Association (HEMA)

SENATE BILL 506 RELATING TO CONSUMER PROTECTION

SENATE COMMITTEE ON AGRICULTURE AND ENVIRONMENT The Honorable Mike Gabbard, Chair The Honorable Herbert M. "Tim" Richards, III, Vice Chair

> Monday, January 30, 2023 @ 2:00 PM Conference Room 224 & Videoconference

Aloha Chair Gabbard, Vice Chair Richards, and Members of the Committee:

I am Eric Wright, president of the Hawaii Energy Marketers Association (HEMA). HEMA is a nonprofit trade association comprised of members who market motor fuel products and operate convenience stores across the Hawaiian Islands.

Senate Bill 506 requires services stations to affix, bear or attach an environmental warning label at each dispensing gas pump subject to Public Utility Commission approval.

While HEMA appreciates the intent of this measure, we believe this bill is unnecessary because we already have adequate warning labels at dispensing gas pumps. Foremost warning has been the safety of life and property. These include and are not limited to:

- 1. No Smoking
- 2. Turn Off Engine
- 3. Turn Off Cell Phone & Other Electronic Devices
- 4. Fill Portable Containers on the Ground
- 5. Discharge Your Static Electricity Before Fueling
- 6. If a Fire Starts, Do Not Remove Nozzle
- 7. Never Allow Children to Use Pump

However, if the committee is inclined to pass on this measure, we respectfully ask that any warning label be made voluntarily at retail and service station.

Thank you for allowing HEMA the opportunity to submit testimony on this bill.

TO:	Members of the Committee on Agriculture and Environment
FROM:	Natalie Iwasa 808-395-3233
HEARING:	2:00 p.m. Monday, January 30, 2023
SUBJECT:	SB 506 – Requiring Labels on Fuel Pumps – OPPOSED

Aloha Chair Gabbard and Committee Members,

Thank you for allowing me the opportunity to provide testimony on SB 506, which would require self-service stations to put labels on their fuel pumps specifying the impact of "fuel consumption."

First of all, someone should rethink the use of the term "consumption."

Second, we don't need any more labels on fuel pumps.

Please work on other issues that are more important.

TESTIMONY OF LEODOLOFF R. ASUNCION, JR. CHAIR, PUBLIC UTILITIES COMMISSION STATE OF HAWAII

TO THE SENATE COMMITTEE ON AGRICULTURE AND ENVIRONMENT

January 30, 2023 2:00 p.m.

Chair Gabbard, Vice Chair Richards, and Members of the Committee:

MEASURE: S.B. No. 506 TITLE: RELATING TO CONSUMER PROTECTION.

DESCRIPTION: Requires self-service stations to put labels on gas dispensing equipment that advise consumers on the effects of fossil fuel consumption to human health and the environment.

POSITION:

The Public Utilities Commission ("Commission") offers the following comments for consideration.

COMMENTS:

The Commission appreciates the intent of this measure to inform users of self-service gas pump dispensing equipment in a retail service station of the human health and environmental impacts of fossil fuel consumption.

However, the Commission requests the Legislature provide necessary clarity on the administration, implementation, and enforcement to effectuate the intent of the proposed legislation.

The Commission observes that there may be required signage on self-service gas pump dispensing equipment as provided in Hawaii State law, including but not limited to, octane content and safety notice on the pump handles. Corporations affiliated with or contracted by service stations may also have requirements to ensure credit card safety and rewards S.B. No. 506 Page 2

signage. County ordinances may also require stations to provide identifying markings per self-service gas pump.

Finally, the Commission notes other agencies may have the relevant expertise on the human health and environmental impacts associated with burning gasoline, diesel, and ethanol, and therefore may be better suited to carry out the duties established in this measure.

Thank you for the opportunity to testify on this measure.

<u>SB-506</u> Submitted on: 1/30/2023 7:35:24 AM Testimony for AEN on 1/30/2023 2:00:00 PM

Submitted By	Organization	Testifier Position	Testify
Barak Kamelgard	Testifying for Think Beyond the Pump	Support	Written Testimony Only

Comments:

Thank you for taking the time to listen to comments on SB143 today. My name is Barak Kamelgard. I am a Director of the non-profit Think Beyond the Pump, as well as an attorney who has researched and written about the legal implications of these types of warning labels.

Hawaii should adopt SB143 and require self-service gas stations to put labels on gas dispensing equipment that advise consumers on the effects of fossil fuel consumption to human health and the environment. The state is particularly vulnerable to the impacts of climate change, including sea level rise, coastal erosion, and more frequent and severe storms. These impacts threaten Hawaii's economy, infrastructure, and natural resources, and can have a significant impact on the health and well-being of its residents. By placing climate change warnings on gas station pumps, Hawaii can raise awareness about the urgent need to reduce greenhouse gas emissions and transition to cleaner forms of energy, and encourage individuals and businesses to take action to reduce their own carbon footprint. Additionally, Hawaii has committed to reducing its dependence on fossil fuels and reducing greenhouse gas emissions. Requiring self-service gas stations to label their equipment with information on the effects of fossil fuel consumption aligns with these goals and demonstrates the state's commitment to sustainability. By highlighting the specific impacts of climate change that Hawaii is facing, these warnings can help to increase political pressure on local and national leaders to take more meaningful action to address the crisis.

Moreover, there are several reasons why climate change warnings are a good idea and an important step forward:

1. Labels have transparency: Labels on gas dispensing equipment would provide clear and transparent information to consumers about the environmental impact of their fuel choices. This would allow consumers to make more informed decisions about their energy consumption and support the transition to cleaner energy sources.

2. Gasoline combustion carries invisible costs: The emissions from gasoline combustion, such as carbon dioxide and other greenhouse gases, contribute to climate change and other environmental harms, such as air pollution, which can lead to negative health impacts such as respiratory diseases and cancer. These costs are often invisible to consumers, but they are real and significant. These invisible costs are not reflected in the price of gasoline and many consumers are unaware of the harms caused by their energy consumption. Labels on gas dispensing equipment would help to make these invisible costs more visible.

3. Consumers have a poor understanding of what the harms are: Many consumers are not aware of the full extent of the harms caused by gasoline combustion. Labels on gas dispensing equipment would help to educate consumers about the environmental impact of their choices and increase their awareness of the harms caused by their energy consumption, thereby helping them make more informed decisions.

4. Consumers have a right to know: Consumers have a right to know about the environmental impact of the products they are purchasing. Climate change warnings on gas station pumps would provide them with this important information and empower consumers to make more sustainable choices.

5. Labels make sense because people will need better education in order for Hawaii to switch to electric vehicles: The transition to electric vehicles will require significant changes in consumer behavior and education. Education and awareness are crucial for the success of this transition. In order for Hawaii to successfully transition to electric vehicles, consumers need to be educated about the environmental benefits of electric vehicles and the harms caused by gasoline combustion. Climate change warnings on gas station pumps would be an important tool in this process. By placing climate change warnings on gas station pumps, consumers can be reminded of the need to consider alternative transportation options and make more environmentally-conscious choices. Moreover, by highlighting the negative effects of fossil fuel consumption, labeling gas dispensing equipment could encourage consumers to explore alternative fuel options, such as electric vehicles, which would further reduce the state's dependence on fossil fuels.

6. Consumers play a crucial role in determining the success of the transition to electric vehicles: The success of the transition to electric vehicles will depend on consumer behavior and choices. By making informed decisions and choosing to invest in electric vehicles, consumers can help drive the demand for and development of these vehicles. Climate change warnings on gas station pumps can serve as a reminder of the importance of these choices.

In conclusion, please adopt SB143 and take the first step forward towards a cleaner, greener economy in Hawaii.

Thank you very much for your time.

<u>SB-506</u> Submitted on: 1/27/2023 8:35:51 PM Testimony for AEN on 1/30/2023 2:00:00 PM

Submitted By	Organization	Testifier Position	Testify
Gerard Silva	Individual	Oppose	Written Testimony Only

Comments:

There is no such thing as Fossil Fuel. The Ellits payed for them to Creat this name just to say that it means Fuel is not for ever but this consept is Bulshit. Oil is just like WaterIt will last as long as water will and longer. So do not belive the Bullshit!!!!!

<u>SB-506</u> Submitted on: 1/29/2023 11:59:10 AM Testimony for AEN on 1/30/2023 2:00:00 PM

Submitted By	Organization	Testifier Position	Testify
kalia Naia	Individual	Support	Written Testimony Only

Comments:

I strongy support stopping people from taking fish from Hawaii's reefs for the aquarium

trade. I have seen first hand how much this has affected the reefs in my backyard in South Kohala and the rebound that has happened in recent years. It was horrible to come to the dock and see all the fish these people had "harvested" when we all know how they will also all die a early death if they even MAKE it to the pet stores. It really is nsane to think the destruction this causes to this fragile ecosystem has ever been legal or there is any question at all that it needs to be outlawed forever. It is NOT a good option in any way shape or form to continue to take fish for a few people to make money from taking fish where they are enjoyed by many more people in their natural habitat.

Thank you, Kalia Naia

<u>SB-506</u> Submitted on: 1/29/2023 1:51:18 PM Testimony for AEN on 1/30/2023 2:00:00 PM

Submitted By	Organization	Testifier Position	Testify
James Brooks	Individual	Support	Written Testimony Only

Comments:

Dear Senate Committee on Agriculture and Environment,

I urge the committee to vote yes on SB 506. As some of you may know, the City of Cambridge, MA and the country of Sweden currently have consumer information about public health and climate change posted at gas pumps since 2020 and 2021 respectively. There is an urgent need for consumers to get scienced-based information about the climate and health effects when they buy gas. Climate and health warning labels available at the point of sale are the best time and place to educate consumers about these harms. Consumer knowledge about the health effects and climate effects produced when they consume these fuels is low, and a key component to Hawaii transitioning off fossil fuel, as well as lessening its depeendence on imported fuels, will be through consumer education. Lastly, consumers and global citizens pay **now** the invisible environmental and public health costs from burning gas, and they have a right to know so that they can make better choices.

Mahalo,

James Brooks

<u>SB-506</u> Submitted on: 1/29/2023 3:55:36 PM Testimony for AEN on 1/30/2023 2:00:00 PM

Submitted By	Organization	Testifier Position	Testify
Jack Lucero Fleck	Individual	Support	Written Testimony Only

Comments:

Please support SB506. It seems highly irresponsible to allow the sale of a product which is highly polluting and causing climate chaos without any warning to the public about these effects. I suggest you reference the Intergovernmental Panel on Climate Change as a very solid source for the consequences of using gasoline. Or you could base the warning on legislation approved by the State of Hawaii regarding the need to reduce greenhouse gases.

Thank you for supporting SB143. This is an important step in the move to a clean energy future!

Sincerely,

Jack Lucero Fleck

SB 506 TESTIMONY

To: Senate Committee on Agriculture and Environment Hearing on Jan. 30, 2023 at 2:00 p.m.

From: John Kawamoto

Position: Support

Many products that pose health risks are required to place warning labels on the packaging, such as cigarettes, pharmaceutical drugs, and flammable material. Fossil fuels may be the biggest health risk in human history because they are largely responsible for climate change, which threatens the existence of the human species. Gasoline is one of those fossil fuels, yet there is no requirement to place a warning label on it.

The fossil fuel industry has known for decades that its products are causing climate change. Exxon, for example, has known about climate change since 1977, even before it became a public issue. Yet for decades the fossil fuel industry refused to publicly acknowledge climate change because it knew that demand for its products would decline if the world understood the risks,

With an eye on profits the fossil fuel industry used the same consultants that the tobacco industry used to develop strategies about how to communicate with the public. During this time the fossil fuel industry promoted misinformation about climate so that customers would continue to purchase its products.

It makes sense to place a warning label on gasoline to inform consumers of the threats that it poses and to counter the historic misinformation of the fossil fuel industry. I urge the committee to pass the bill.

<u>SB-506</u> Submitted on: 1/30/2023 7:03:45 AM Testimony for AEN on 1/30/2023 2:00:00 PM

Submitted By	Organization	Testifier Position	Testify
Stylianos Syropoulos	Individual	Support	Written Testimony Only

Comments:

These climate labels can increase individual efficacy (how much people think their actions matter), which could motivate people to use less gasoline (a very common finding in the field of environmental and social psychology). Further, they could signal overaching (governmental and popular) support for this behavior (i.e., a social norm) which is an effective way to persuade people to act proenvironmental, which in this case translates to people using less gasoline. Thus I fully support this endeavor and think it is a helpful measure to implement.

<u>SB-506</u> Submitted on: 1/30/2023 8:55:17 AM Testimony for AEN on 1/30/2023 2:00:00 PM

Submitted By	Organization	Testifier Position	Testify
James Sturz	Individual	Support	Written Testimony Only

Comments:

I think this is an excellent idea. It may not do a lot, but it will do something -- and that is more than nothing.

I urge you to push this through.

Angela Crumpton

From:James Brooks <puppa4014@gmail.com>Sent:Monday, January 30, 2023 8:00 AMTo:AEN CommitteeSubject:Support for SB 506

CAUTION: This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.



January 30, 2023

Senate Committee on Agriculture and the Environment State of Hawa'i

Dear Chairperson Mike Gabbard,

I write in support of Senate Bill 143 mandating public health and climate change information labels on all gas pumps in Hawai'i. As a public health communication expert, I can testify to the important effect that well-constructed labeling programs can have in shifting consumer preferences. In the case of gasoline and diesel, consumers need and have a right to know science-based information about the immediate health harms and long-term climate harms caused by burning fossil fuels. The public health and climate change message proposed in SB 143 will help educate all Hawaiians who purchase gasoline and diesel about the pernicious effects of using these products.

Effective public health communication campaigns feature *simple, clear, relevant messages, repeated often, by a variety of trusted sources.* The pump label proposed in SB 143 will support Hawaii's stated goals of moving toward an electrified transportation system. Moreover, it will do so in a completely non-coercive manner, through education.

A State of Hawai'i warning label at the gas pump is both a science-based and a common-sense measure that can help the people of Hawai'i protect their health and the health of our climate.

Mahalo nui loa for this pioneering legislation,

Edward Mailach

Edward Maibach, MPH, PhD Mason Distinguished University Professor and Director George Mason University Center for Climate Change Communication Fellow, American Association for the Advancement of Science Member, National Academy of Medicine

<u>SB-506</u> Submitted on: 1/30/2023 11:52:44 AM Testimony for AEN on 1/30/2023 2:00:00 PM

Submitted By	Organization	Testifier Position	Testify
Raymond Pajek	Individual	Support	Written Testimony Only

Comments:

I support this legislation because there is no current guardrail for this product, and because there is a growing opportunity for consumers to switch to gas-free transportation. There are many used vehicles currently on sale in the ranges that suits all income earners (Nissan Leafs for \$3,000, or Tesla Model 3's for \$20,000), so it should be feasible now for consumers to begin thinking about safer options for driving. (65% or more of car buyers buy used vehicles and there's a growing amount of EV's on the second hand market) Even if a driver were to be encouraged to move to a Prius, that would be a great start. (A high-performance Tacoma gets 15mpg and a Prius-C gets about 55mpg) Second, I think that there are tremendous risks to our vulnerable, disadvantaged residents who have no choice but to live adjacent to highways and high-traffic roadways, and who have children that are afflicted with asthma and other health concerns. Burning gasoline is both a current health danger to these communities, as it is a longer term risk for our environment due to climate change.

Senate Committee on Agriculture and Environment: AENcommittee@capitol.**hawaii**.gov

House Committee on Energy & Environmental Protection

Chair: Nicole E. Lowen: replowen@capitol.hawaii.gov

Vice Chair: Elle Cochran: repcochran@capitol.hawaii.gov

Dear Senate and House Committee on Agriculture and Environment/Energy & Environmental Protection,

We are public health professionals who have long supported placing health warnings on fossil fuel 'points of use', such as gas pumps, to recognize that transportation is the primary source of greenhouse gas emissions in Hawai'i. These warnings can modify the low public awareness of the health and climate effects from the combustion of conventional transportation fuels. We are pleased to hear Hawai'i has a chance to set a precedent as the first U.S state to prioritize the health benefits of mitigation policies in the regulation of fossil fuel use.

We believe this to be an important intervention that will help consumers in the transition towards less carbon-intense transport. As we have <u>argued</u>, highlighting health impacts of products is more likely to be persuasive in changing consumer behaviour than referring only to environmental impacts. As you may know, Sweden and the City of Cambridge, MA have climate-health information labels on all gas pumps.

We urge you to pass this common-sense bill that will promote and protect the health of Hawai'ians and set the standard for other states.

We are signing in our personal capacity, not as representatives of our universities.

Mahalo nui loa!

Kristie L. Ebi, Ph.D., MPH; honorary doctor Umea University Professor, Center for Health and the Global Environment (CHanGE) University of Washington Seattle, WA 98195 USA krisebi@uw.edu http://globalchange.uw.edu

Professor Lorraine Whitmarsh MBE Director - Centre for Climate Change & Social Transformations (CAST) Department of Psychology University of Bath, United Kingdom

Dr Mike Gill, former Regional Director of Public Health, England

Professor Sir Andy Haines