



Email: communications@ulupono.com

SENATE COMMITTEE ON TRANSPORTATION & ENERGY
Friday, March 16, 2018 — 1:20 p.m. — Room 225

Ulupono Initiative Strongly Supports HB 2108 HD 1, Relating to the Issuance of Special Purpose Revenue Bonds to Assist a Seawater Air Conditioning Project in Hawaii

Dear Chair Inouye, Vice Chair Espero, and Members of the Committee:

My name is Murray Clay and I am Managing Partner of the Ulupono Initiative, a Hawai'i-based impact investment firm that strives to improve the quality of life for the people of Hawai'i by working toward solutions that create more locally produced food; increase affordable, clean, renewable energy; and better management of waste and fresh water. Ulupono believes that self-sufficiency is essential to our future prosperity and will help shape a future where economic progress and mission-focused impact can work hand in hand.

Ulupono strongly supports HB 2108 HD 1, which extends the special purpose revenue bond authorization for Kaiuli Energy, LLC, because it aligns with our goal of increasing the production of clean, renewable energy in Hawai'i.

Ulupono supports Kaiuli's request for an extension because we believe seawater air conditioning (SWAC) technology is proven and will help replace the energy-intensive central refrigeration system of a traditional air conditioning system. Kaiuli is targeting hotels and other buildings in the Waikiki and Ala Moana areas that could benefit from SWAC, which will include substantial savings on electricity and water consumption, system replacement costs, and maintenance costs. This technology is known to provide substantial savings of energy and fresh water, both of which are critical to our economy and sustainability. In addition, it will also help the State move closer to its clean energy goals and support Hawai'i's vital tourism industry.

With State DAGS buildings signing on to participate with Honolulu Seawater Air Conditioning in the downtown Honolulu area over the last few months, there should be more optimism by State government for SWAC projects like Kaiuli for the Waikiki and Ala Moana areas.

As Hawai'i's energy issues become more complex and challenging, we appreciate this

Investing in a Sustainable Hawai'i



committee's efforts to look at policies that support renewable energy production.

Thank you for this opportunity to testify.

Respectfully,

Murray Clay
Managing Partner



ORGANIZING *for* ACTION

To: The Senate Committee on Transportation and Energy
From: Brodie Lockard, OFA Hawaii Climate Lead, 808-262-1285
Date: Friday, 3/16/18

In support of HB 2108 HD1

Dear Chair Inouye, Vice Chair Espero and Committee members,

I am the Hawaii Climate Lead for Organizing for Action, a progressive group that played a lead in electing President Barack Obama twice. OFA Hawaii supports HB 2108.

Seawater Air Conditioning (SWAC) deserves the support of the state. It is very well-suited to Hawaii because of our warm climate, and the proximity of so many large buildings to water, particularly in downtown Honolulu.

SWAC lowers electrical costs and provides rate stability. It currently cools eight state buildings in downtown Honolulu, reducing electricity use by over 5.3 million kilowatt hours yearly. (The average U.S. utility customer uses about 11,000 kilowatt hours yearly.) [1]

SWAC is clean, renewable, and has no significant environmental impact. It cools air directly, requiring no conversion to electricity. It reduces fossil fuel use and greenhouse gas emissions.

District Cooling provides high reliability (generally 99.99% or greater) and can cool 24hrs/day, 365 days/year.

SWAC reduces sewer production and water usage, and requires minimal on-site equipment and maintenance.

Please support this bill so SWAC can expand, save more electricity and reduce Hawaii's greenhouse gas emissions even more.

Thank you for the opportunity to testify.

[1] [http://www.honoluluswac.com/assets/pdfs/20171114-2 Chilled water will now cool 8 state facilities in Downtown Honolulu - Hawaii News Now - KGMB and KHNL.pdf](http://www.honoluluswac.com/assets/pdfs/20171114-2%20Chilled%20water%20will%20now%20cool%208%20state%20facilities%20in%20Downtown%20Honolulu%20-%20Hawaii%20News%20Now%20-%20KGMB%20and%20KHNL.pdf)

Brodie Lockard
Hawaii Climate Lead, Organizing for Action

HB-2108-HD-1

Submitted on: 3/14/2018 11:22:52 AM

Testimony for TRE on 3/16/2018 1:20:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Linda Lee Kolstad	Testifying for Association of Apartment Owners of the Ilikai	Oppose	No

Comments:

The reliability of seawater plants may be compromised under adverse ocean and climatic conditions. The Hawaii Emergency Management Agency recently disclosed that up to 60% of electricity can be lost in a hurricane or tsunami. Due to this lack of reliability of seawater plants, this bill should be amended to prohibit seawater plants in areas such as State harbors near resort districts or areas of special environmental sensitivity.



Owners of Ilikai Apartment Building, Inc.
1777 Ala Moana Blvd., Suite 226 • Honolulu, HI 96815 • Ph. 942-1828 • Fax: 942-2443

Testimony for
Senate Committee on Transportation and Energy
Friday, March 16, 2018, 1:20 p.m. Room 225

Senator Lorraine R. Inouye, Chair
Senator Will Espero, Vice Chair

HB 2108 HD1 RELATING TO THE ISSUANCE OF SPECIAL PURPOSE REVENUE BONDS TO
ASSIST A SEAWATER AIR CONDITIONING PROJECT IN HAWAII

Chair Inouye and Members of the Committee,

This testimony is in STRONG OPPOSITION to extending the issuance date for special purpose revenue bonds for sea water air conditioning.

We should not issue public bonds for this purpose unless it is clearly stipulated in the bill that no AC plants will be built on public recreational lands since this would convert these public-use lands to a usage the benefits private parties.

A handwritten signature in black ink, appearing to read 'Rob Johnson', is written over a light blue rectangular background.

Rob Johnson
General Manager
Ilikai AOAO



To: The Senate Committee on Transportation and Energy
From: Sherry Pollack, 350Hawaii.org
Date: Friday, 3/16/18

In support of HB 2108 HD1

Dear Chair Inouye, Vice Chair Espero and Committee members,

I am Vice President of the Hawaii chapter of 350.org, the largest international organization dedicated to fighting climate change. 350Hawaii.org supports HB 2108 HD1.

Seawater Air Conditioning (SWAC) deserves the support of the state. It is very well-suited to Hawaii because of our warm climate, and the proximity of so many large buildings to water, particularly in downtown Honolulu.

SWAC lowers electrical costs and provides rate stability. It currently cools eight state buildings in downtown Honolulu, reducing electricity use by over 5.3 million kilowatt hours yearly. (The average U.S. utility customer uses about 11,000 kilowatt hours yearly.) [1]

SWAC is clean, renewable, and has no significant environmental impact. It cools air directly, requiring no conversion to electricity. It reduces fossil fuel use and greenhouse gas emissions.

District Cooling provides high reliability (generally 99.99% or greater) and can cool 24hrs/day, 365 days/year.

SWAC reduces sewer production and water usage, and requires minimal on-site equipment and maintenance.

Please support this bill so SWAC can expand, save more electricity and reduce Hawaii's greenhouse gas emissions even more.

Thank you for the opportunity to testify.

Sherry Pollack
Vice President, 350Hawaii.org

[1] [http://www.honoluluswac.com/assets/pdfs/20171114-2 Chilled water will now cool 8 state facilities in Downtown Honolulu - Hawaii News Now - KGMB and KHNL.pdf](http://www.honoluluswac.com/assets/pdfs/20171114-2%20Chilled%20water%20will%20now%20cool%208%20state%20facilities%20in%20Downtown%20Honolulu%20-%20Hawaii%20News%20Now%20-%20KGMB%20and%20KHNL.pdf)

HB-2108-HD-1

Submitted on: 3/14/2018 10:22:39 PM

Testimony for TRE on 3/16/2018 1:20:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Janet Graham	Testifying for 350.org	Support	No

Comments:

I support this bill. Seawater Air Conditioning (SWAC) is clean, renewable, and has no significant environmental impact. It requires no conversion to electricity, instead cooling air directly. It therefore reduces fossil fuel use and greenhouse gas emissions.

SWAC deserves the support of the state. It is very well-suited to Hawaii because of our warm climate, and the proximity of so many large buildings to water, particularly in downtown Honolulu.

Thank you for your consideration of this testimony.

HB-2108-HD-1

Submitted on: 3/15/2018 2:07:02 PM

Testimony for TRE on 3/16/2018 1:20:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Melodie Aduja	Testifying for OCC Legislative Priorities Committee, Democratic Party of Hawai'i	Support	No

Comments:

Good afternoon, my name is Melodie Aduja. I serve as Chair of the Oahu County Committee ("OCC") Legislative Priorities Committee of the Democratic Party of Hawaii. Thank you for the opportunity to provide written testimony on House Bill No.2108 HD1 relating to special purpose revenue bonds for seawater air conditioning using a chilled water distribution system by Kaiuli Energy, LLC.

The OCC Legislative Priorities Committee is in favor of House Bill No 2108 HD1 and supports its passage.

House Bill No.2108 HD1 is in alignment with the Platform of the Democratic Party of Hawai'i ("DPH"), 2016, as it extends the authorization to issue special purpose revenue bonds to assist Kaiuli Energy, LLC, with the financing of the planning, design, and construction of a seawater air conditioning district cooling facility and chilled water distribution system to June 30, 2023.

The DPH Platform states that "[w]e support energy independence, selfsufficiency, affordability and reliability for Hawai'i through the development of renewable alternative energy sources. Specifically, we need to support policies that foster the development of energy production methods that de-emphasize carbon-based fuels and promote renewable sources such as wind, solar, wave, geothermal and Ocean Thermal Energy Conversion 456 (OTEC). (Platform of the DPH, P. 9, Lines 452-456)).

Given that House Bill No.2108 HD1 extends the authorization to issue special purpose revenue bonds to assist Kaiuli Energy, LLC, with the financing of the planning, design, and construction of a seawater air conditioning district cooling facility and chilled water distribution system to June 30, 2023, it is the position of the OCC Legislative Priorities Committee to support this measure.

Thank you very much for your kind consideration.

Sincerely yours,

/s/ Melodie Aduja

Melodie Aduja, Chair, OCC Legislative Priorities Committee

Email: legislativepriorities@gmail.com, Text/Tel.: (808) 258-8889



March 14, 2018

To: Honorable Lorraine R. Inouye, Chair
Honorable Will Espero, Vice Chair
Committee on Transportation and Energy

Subject: Support for HB 2108 HD1 – Relating to the issuance of Special purpose revenue bonds to assist a seawater air conditioning project in Hawaii

NOTICE OF HEARING

DATE: Friday, March 16, 2018
TIME: 1:20 p.m.
PLACE: Conference Room 225
State Capitol
415 South Beretania Street

Dear Chair Inouye and Vice Espero,

I come to you in Strong Support of extending the authorization period for the approval and issuance of these Special Revenue Bonds to assist Kaiuli Energy, LLC with the development of seawater air conditioning projects (SWAC) in the State of Hawaii. Passage of this bill will extend the authorization period from July, 2018 to July 2023.

My name is Lance Wilhelm and I am the partner in charge of the development of the SWAC project in Waikiki, Kaiuli's cornerstone project. These revenue bonds are critical to financing the planning, design and construction of a SWAC, a district cooling facility and chilled water distribution system. SWAC projects are not rocket science. They are basic infrastructure improvements that exist in many cities where the technology has been tested and expanded over the last two decades. The largest system in the world is in Toronto, fulfilling about 25% of that City's cooling requirements; it's over three times the size of our Waikiki system and it continues to grow. Kaiuli's has had the good fortune of interfacing with the Toronto system's original developers and tapping their know-how in the design of our system.

SWAC offers many benefits to Waikiki. Our initial plans call for a 25,000 ton system. At its peak it will substantially reduce Waikiki's carbon footprint by:

- Reducing fossil fuel consumption by up to 170,000 barrels of oil each year;
- Reducing electrical usage by up to 75,000,000 kWh each year;
- Reducing harmful emissions by up to 80,000 tons each year;
- Reducing sewer production by up to 110,000,000 gallons each year; and
- Reducing potable water usage by up to 250,000,000 gallons each year.



We have had very favorable discussions with every major hotel operator in Waikiki as they see both the opportunity to market Waikiki as a green visitor destination area and the opportunity to experience substantial financial savings. And we have also enjoyed favorable discussions with the utilities as the SWAC system will reduce the burden on their facilities and resources.

There is very little downside to extending this authorization period. No bonds will be sold or funds released until the State regulators are convinced that we are prepared to succeed and that we have assembled all the other necessary resources.

We are excited about the opportunity to develop a SWAC system here in Hawaii and appreciate your favorable consideration.

Mahalo,

Lance Wilhelm
Partner
Kaiuli Energy, LLC



Statement of
Duke Hartman, P.E.
Vice President, Business Development
Makai Ocean Engineering, Inc.
before the
COMMITTEE ON TRANSPORTATION AND ENERGY
Friday, March 16, 2018
1:20pm
State Capitol, Conference Room 225
In consideration of
HB 2108, HD1
RELATING TO THE ISSUANCE OF SPECIAL PURPOSE REVENUE BONDS TO
ASSIST A SEAWATER AIR CONDITIONING PROJECT IN HAWAII

Chair Inouye, Vice Chair Espero, and members of the Committee on Transportation and Energy

Makai Ocean Engineering, Inc. **STRONGLY SUPPORTS HB 2108, HD1** that extends the authorization to issue special purpose revenue bonds to assist Kaiuli Energy, LLC, with the financing of the planning, design, and construction of a seawater air conditioning district cooling facility and chilled water distribution system.

Seawater air conditioning (SWAC) is a technology that can dramatically reduce the electrical energy consumed for cooling by 50% to as high as 90% (as demonstrated by a previous system designed by Makai). This can add up to a significant amount of energy saved, especially since the electrical energy consumed by the cooling of large, dense, tropical resort areas like Waikiki can be 40% or more of the overall electrical energy consumed. This is a utility-scale energy efficiency project that supports Hawai'i's move away from fossil fuel consumption and benefits the community at large. We see this as a win for the community, the tourist visitor, and the environment.

This is why we **STRONGLY SUPPORTS HB 2108, HD1**. Thank you for the opportunity to offer these comments.

HB-2108-HD-1

Submitted on: 3/14/2018 2:31:03 AM

Testimony for TRE on 3/16/2018 1:20:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Jonathan Boyne	Individual	Support	No

Comments:

Seawater Air Conditioning (SWAC) is clean, renewable, and has no significant environmental impact. It requires no conversion to electricity, instead cooling air directly. It therefore reduces fossil fuel use and greenhouse gas emissions.

SWAC deserves the support of the state. It is very well-suited to Hawaii because of our warm climate, and the proximity of so many large buildings to water, particularly in downtown Honolulu.

HB-2108-HD-1

Submitted on: 3/14/2018 4:14:26 AM

Testimony for TRE on 3/16/2018 1:20:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Patricia Blair	Individual	Support	No

Comments:

HB-2108-HD-1

Submitted on: 3/14/2018 7:38:44 AM

Testimony for TRE on 3/16/2018 1:20:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Lois Crozer	Individual	Support	No

Comments:

HB-2108-HD-1

Submitted on: 3/14/2018 9:09:06 AM

Testimony for TRE on 3/16/2018 1:20:00 PM

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

Comments:

I support bill HB2108 HD1.

Seawater Air Conditioning (SWAC) is clean, renewable, and has no significant environmental impact. It requires no conversion to electricity, instead cooling air directly. It therefore reduces fossil fuel use and greenhouse gas emissions.

SWAC deserves the support of the state. It is very well-suited to Hawaii because of our warm climate, and the proximity of so many large buildings to water, particularly in downtown Honolulu.

HB-2108-HD-1

Submitted on: 3/14/2018 9:15:24 AM

Testimony for TRE on 3/16/2018 1:20:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Shahbano Agha	Individual	Oppose	No

Comments:

I oppose the bond issuance due to disturbance in areas of special environmental significance.

HB-2108-HD-1

Submitted on: 3/14/2018 9:16:40 AM

Testimony for TRE on 3/16/2018 1:20:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Jordan Moniuszko	Individual	Support	No

Comments:

Seawater Air Conditioning (SWAC) is clean, renewable, and has no significant environmental impact. It requires no conversion to electricity, instead cooling air directly. It therefore reduces fossil fuel use and greenhouse gas emissions.

SWAC deserves the support of the state. It is very well-suited to Hawaii because of our warm climate, and the proximity of so many large buildings to water, particularly in downtown Honolulu.

HB-2108-HD-1

Submitted on: 3/14/2018 9:59:14 AM

Testimony for TRE on 3/16/2018 1:20:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Sandra Fujita	Individual	Support	No

Comments:

HB-2108-HD-1

Submitted on: 3/14/2018 10:21:04 AM

Testimony for TRE on 3/16/2018 1:20:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Nadia Agha	Individual	Oppose	No

Comments:

Aloha,

As a frequent visitor of Honolulu, and part of family owned condos at the Ilikai in Waikiki, I was very disturbed to hear that there may be a bonds issuance to create an air-conditioning seawater plant. I would like to **OPPOSE bill HB2108, HD1**. We need to protect the natural environment in Hawaii. It seems to have been lost on the rest of the world, and we come to Hawaii to experience and enjoy one of the only places that still have natural beauty.

Best Regards, Nadia Agha

HB-2108-HD-1

Submitted on: 3/14/2018 11:18:19 AM

Testimony for TRE on 3/16/2018 1:20:00 PM

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

Comments:

HB-2108-HD-1

Submitted on: 3/14/2018 11:33:56 AM

Testimony for TRE on 3/16/2018 1:20:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Thomas Craig	Individual	Support	No

Comments:

HB-2108-HD-1

Submitted on: 3/14/2018 2:07:59 PM

Testimony for TRE on 3/16/2018 1:20:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Samuel John	Individual	Support	No

Comments:

I would like to see our state support SWAC as a viable, clean and renewable means by which to provide air cooling, especially within the downtown area.

HB-2108-HD-1

Submitted on: 3/14/2018 2:16:56 PM

Testimony for TRE on 3/16/2018 1:20:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
janet elsergany	Individual	Oppose	No

Comments:

HB-2108-HD-1

Submitted on: 3/14/2018 5:34:28 PM

Testimony for TRE on 3/16/2018 1:20:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
tia pearson	Individual	Support	Yes

Comments:

I support Seawater Air Conditioning

HB-2108-HD-1

Submitted on: 3/14/2018 7:25:43 PM

Testimony for TRE on 3/16/2018 1:20:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Joan Gannon	Individual	Support	No

Comments:

To: TRE Committee meeting on 3/16/18 at 1:20 pm in room 225

Re: please pass HB 2108 and issue a special purpose revenue bond to assist a seawater air conditioning project in Hawaii. Seawater air conditioning cools air directly reducing fossil fuel use and greenhouse gas emissions.

Thank you for your consideration

Joan Gannon democrat, resident Hawaii Island, snorkeler

HB-2108-HD-1

Submitted on: 3/15/2018 7:54:13 AM

Testimony for TRE on 3/16/2018 1:20:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Mirza M Agha	Individual	Oppose	No

Comments:

HB-2108-HD-1

Submitted on: 3/15/2018 8:13:33 AM

Testimony for TRE on 3/16/2018 1:20:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
TANYA AGHA	Individual	Oppose	No

Comments:

I STRONGLY OPPOSE THIS MEASURE!!!

Senator Lorraine R. Inouye, Chair
Senator Will Espero, Vice Chair
Transportation & Energy Committee Members
Hawaii State Capitol

Testimony by: Nancy Mueting

Contact address -----

or email: nancymueting@hotmail.com

Hearing: March 16, 2018, 1:20 PM, rm. 225

HB2108, HD1-Bonds to Assist a Seawater Plant in Hawaii

Support

Oppose

Please consider amending the bill to exclude air-conditioning seawater plants in resort or environmentally significant areas. Utility features are unproductive to goals of uncompromised environmental beauty.

We are experimenting with the comfort of visitors. Plants are located in near shore areas and we don't know their reliability under adverse tidal conditions.

Thank you.

HB-2108-HD-1

Submitted on: 3/15/2018 10:14:31 AM

Testimony for TRE on 3/16/2018 1:20:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Sarah Toole	Individual	Support	No

Comments:

My name is Sarah Toole, my address is 1128 Ala Napunani St. 96818, and I am a political science student at UH Manoa.

I support this bill. Science is necessary to find out what our political courses of action should be.

HB-2108-HD-1

Submitted on: 3/15/2018 12:03:39 PM

Testimony for TRE on 3/16/2018 1:20:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
charles thomas carroll	Individual	Oppose	No

Comments:

I would like to respectfully submit my testimony in opposition to HB 2108 HD1 as it is written. Although the concept of seawater AC systems seems very valid I am testifying in opposition to this measure because the bill leaves open the possibility that an AC plant could be placed on public-recreational lands and I do not feel it is appropriate to displace public lands for a useage that would benefit private interests such as hotels. I believe the bill should be amended to include language that restricts any potential placement of an AC plant to non-public, non-recreational lands. Thank you for allowing my comments.

Charles Carroll

HB-2108-HD-1

Submitted on: 3/15/2018 12:20:49 PM

Testimony for TRE on 3/16/2018 1:20:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Cindy Jacobson	Individual	Oppose	Yes

Comments:

Utility plants and operations such as these belong in commercial areas that will not impact residential neighborhoods. They also do not belong on state lands, parks, harbors and other areas that are set aside and/or designated for the pleasure and use of the general public.

Thank you for your understanding in this matter.

From: [Kathryn Fitzsimmons](#)
To: [TRE Testimony](#)
Subject: Opposition to HB2108
Date: Thursday, March 15, 2018 11:28:27 AM

I am writing to OPPOSE HB2108 about bond issuance for Kaiuli Energy to create air conditioning seawater plants at Hawaii's small boat harbors. I am particularly concerned and OPPOSED to industrial plants being erected at our beautiful small boat harbors, such as the Ala Wai Boat Harbor. I am a long-time permanent resident in the Ala Wai Harbor area and believe the harbor should remain an uncluttered visually attractive facility for the sole purpose of maritime recreation for the people of Hawaii. Thank you for your support. Kathryn Fitzsimmons

From: [Virginia Marstall](#)
To: [TRE Testimony](#)
Subject: HB2108, HD1 Testimony
Date: Thursday, March 15, 2018 10:21:39 AM

opposed to **HB2108, HD1- Bonds for a Seawater Air-conditioning Plant**

Aloha Chairs and committee members;

I cannot support bonds issuance for a plant of unknown whereabouts. The public should be informed on its location to be fair to neighbors. Adding infrastructure to Waikiki or its boat harbor would be against its primary goal as a beautiful district.

Thank you for consideration.

V. Marstall

HB-2108-HD-1

Submitted on: 3/15/2018 1:34:45 PM

Testimony for TRE on 3/16/2018 1:20:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Taurie Kinoshita	Individual	Support	No

Comments:

Seawater Air Conditioning (SWAC) is clean, renewable, and has no significant environmental impact. It requires no conversion to electricity, instead cooling air directly. It therefore reduces fossil fuel use and greenhouse gas emissions. Thank you for your consideration.

HB-2108-HD-1

Submitted on: 3/15/2018 4:28:27 PM

Testimony for TRE on 3/16/2018 1:20:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Laura Gray	Individual	Support	No

Comments:

We need to use the most efficient means for cooling.



HB-2108-HD-1

Submitted on: 3/15/2018 6:48:50 PM

Testimony for TRE on 3/16/2018 1:20:00 PM

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

Comments:

I to 350HI and we try to assist policy makers to create bills that promote renewables, keep fossil fuels in the ground and try to make State Funds join the di-vestment movement so we support the following:

Technological development and R&D in PV, Wind generation, battery storage and driving prices down so that wind and PV are competitive with coal without all the environmental, social, health, poverty externalities. So we should try and implement the United Nations' Global Goals. 7. Hawaii is well placed to use these and other (OTEC, Geothermal & market mechanisms to transition to a 100% renewable future.

Air conditioners consume a large amount of energy in Hawaii. HB2108 HD! is an innovative measure that could lead to reducing our air con load.

Seawater Air Conditioning (SWAC) is clean, renewable, and has no significant environmental impact. It requires no conversion to electricity, instead cooling air directly. It therefore reduces fossil fuel use and greenhouse gas emissions.

SWAC deserves the support of the state. It is very well-suited to Hawaii because of our warm climate, and the proximity of so many large buildings to water, particularly in downtown Honolulu.