DEPARTMENT OF BUSINESS, **ECONOMIC DEVELOPMENT & TOURISM**

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DEPUTY DIRECTOR

Statement of LUIS P. SALAVERIA Director Department of Business, Economic Development, and Tourism before the **HOUSE COMMITTEE ON ENERGY & ENVIRONMENTAL PROTECTION**

> Thursday, February 9, 2017 8:30 AM State Capitol, Conference Room 325

In consideration of **BILL NO HB1249** RELATING TO ENERGY EFFICIENCY.

Chair Lee, Vice Chair Lowen, and members of the Committee.

The Department of Business, Economic Development, and Tourism (DBEDT) does not support HB1249 as presently written because it requires the Energy Resources Coordinator (ERC) to grant exemptions from the net zero single family residence requirement.

We do not have the resources to process applications for exemptions or to develop criteria to determine impractical and cost-prohibitive analyses required to implement this requirement. We recommend that the ERC be removed from granting exemptions and that the design professional bear the responsibility of justifying why it is impractical or cost-prohibitive design to net zero capable in the application for a building permit. The design professional also should be required to use his/her professional stamp on the certification statement.

Thank you for the opportunity to testify.



DIRECTOR

LUIS P. SALAVERIA

MARY ALICE EVANS



DAVID Y. IGE GOVERNOR

SHAN S. TSUTSUI

STATE OF HAWAII OFFICE OF THE DIRECTOR DEPARTMENT OF COMMERCE AND CONSUMER AFFAIRS 335 MERCHANT STREET, ROOM 310

P.O. Box 541 HONOLULU, HAWAII 96809 Phone Number: 586-2850 Fax Number: 586-2856 www.hawaii.gov/dcca

TO THE HOUSE COMMITTEE ON ENERGY & ENVIRONMENTAL PROTECTION

THE TWENTY-NINTH LEGISLATURE REGULAR SESSION OF 2017

THURSDAY, FEBRUARY 9, 2017 8:30 A.M.

TESTIMONY OF DEAN NISHINA, EXECUTIVE DIRECTOR, DIVISION OF CONSUMER ADVOCACY, DEPARTMENT OF COMMERCE AND CONSUMER AFFAIRS, TO THE HONORABLE CHRIS LEE, CHAIR, AND MEMBERS OF THE COMMITTEE

HOUSE BILL NO. 1249 - RELATING TO ENERGY EFFICIENCY

DESCRIPTION:

This measure proposes to require the State Building Code Council to adopt net zero energy capability standards for new single-family residential construction and require all new single-family residential construction to be net zero capable by January 1, 2019.

POSITION:

The Division of Consumer Advocacy ("Consumer Advocate") supports the intent of this bill and offers comments.

COMMENTS:

The Consumer Advocate acknowledges the Legislature's concerns related to the economy and importance of residential energy efficiency, and so the Consumer Advocate supports the intent of this bill to direct the State Building Code Council to adopt standards to maximize energy efficiency opportunities in any new single-family residential construction.

CATHERINE P. AWAKUNI COLÓN DIRECTOR

JO ANN M. UCHIDA TAKEUCHI DEPUTY DIRECTOR House Bill No. 1249 House Committee on Energy & Environmental Protection February 9, 2017 Page 2

The Consumer Advocate is concerned, however, by the bill's assumption that a certain level of energy efficiency always and automatically makes on-site generation more cost-effective than full energy services from a public utility. This cost "tipping point" for on-site generation may be highly dependent on a variety of factors outside of the purview of building codes, such as, but not limited to, approved utility tariffs and business models and the comparative future costs of clean energy technologies at both residential and utility scales. Furthermore, there may be challenges to establish "one size fits all" standards for net zero energy capability.

Thank you for this opportunity to testify.



1132 Bishop Street, Suite 1800 • Honolulu, Hawai'i 96813 • HawaiiEnergy.com • P: (808) 839-8880 • F: (808) 441-6068

Before the House Committee on Energy & Environmental Protection Thursday, February 9, 2017, 8:30 A.M., Room 325 HB 1249: Relating to Energy Efficiency

Chair Lee, Vice-Chair Lowen, and members of the committee, thank you for the opportunity to submit testimony on HB 1249. On behalf of the Hawai'i Energy program, I would like to testify in strong **support** for HB 1249. Energy efficiency is the most cost-effective energy resource available in the state, costing a fraction of electricity that is generated, either through renewables or fossil fuels.

Hawai'i Energy works to empower island families and businesses on behalf of the Hawai'i Public Utilities Commission (PUC) to make smart energy choices to reduce energy consumption, save money, and pursue a 100% clean energy future. In collaboration with the Hawai'i State Energy Office, Hawai'i Energy has strongly supported the State Building Code Council's (SBCC) proposal to amend the state's energy conservation code by: (i) repealing the 2006 International Energy Conservation Code (IECC), Hawai'i Administrative Rules (H.A.R.) Chapter 3-181; and (ii) adopting H.A.R. Chapter 3-181.1, based on the IECC 2015 Edition published by the International Codes Council, with amendments applicable to Hawai'i. We see this bill as an extension of our continued support in improving energy codes for the State of Hawai'i.

The energy world has accelerated rapidly in the last decade. In 2009, through the Hawai'i Clean Energy Initiative (HCEI), the state adopted a 40% renewable energy goal, along with a 30% energy efficiency target. Thus, the Energy Efficiency Portfolio Standard (EEPS) was established into law. In 2015, Hawai'i adopted the nation's first 100% clean energy mandate. The EEPS targets envision that more effective codes and standards would be a significant contributor, along with the Hawai'i Energy programs, to achieving the efficiency mandate.

One sector of our society that uses a lot of energy is buildings – refrigeration, cooling, and lighting the places where we all live and work. Reducing wasteful energy use needs to be prioritized, which HB 1249 does by maximizing the investment in cost-effective energy efficiency measures and removes the split incentive that often exists between builder/developer and the owner who ultimately must pay the electricity bill.

Thank you for the opportunity to testify on HB 1249.

Brian Kealoha Executive Director Hawai'i Energy





HOUSE COMMITTEE ON ENERGY & ENVIRONMENTAL PROTECTION

Feb.9, 2017, 8:30 A.M. Room 325 (Testimony is 2 pages long)

TESTIMONY IN SUPPORT OF HB 1294

Aloha Chair Lee, Vice Chair Lowen, and Committee Members:

This bill will maximize the use of energy efficiency in new single-family homes. As further documented below, this will benefit consumers by lowering the total cost of owning a home.

It is important to be clear about what this bill will not do:

- **Will not require all new homes to be "net zero energy."** Home simply must meet the standard of being "**net zero energy** *capable*." This is a standard that ensures that homes are built with as much energy efficiency as is cost-effective for the buyer. It does *not* require the installation of solar panels, batteries, or other energy generation or storage equipment.¹
- Will *not* drive up housing costs for consumers. When a typical consumer buys a new home, the cost of ownership is the cost of the monthly mortgage payment, plus monthly operating costs like energy bills. By maximizing cost-effective energy efficiency, that total monthly cost of ownership can be lowered from day one. This phenomenon can also help to expand access to reduced living costs, by enabling *all* owners of new homes to finance energy efficiency in their mortgage (rather than paying out of pocket).
- **Will not harm the local workforce**. This bill will *benefit* the local workforce. Building energy efficiency into the standard for new homes essentially converts dollars that would have been spent on energy, into dollars spent on labor and materials for new homes.

It is well documented that energy efficiency is extraordinarily cost-effective. For example, in its most recent program year, the state's energy efficiency program (Hawaii Energy), administered by the PUC, invested \$36 million to enable \$435 million in savings (12x return) over the life of those upgrades.

¹ The phrase "net zero energy capable" is admittedly somewhat confusing. It is intended to indicate that a home has reached the point where adding more energy efficiency would be more expensive than simply adding electricity generation to a home. Thus, it is a standard based on cost-effectiveness; it is not a standard based on the net energy consumption/generation of a home.

Despite this remarkable cost-effectiveness of energy efficiency, it remains cheaper to build efficiency into homes and buildings from the start, rather than to install retrofits. According to a 2012 study completed for the Pacific Gas and Electric Company's Zero Net Energy Program, for residential construction conventional energy efficiency "upgrades to a code-compliant new home (e.g. improved windows and insulation levels; high efficiency space conditioning, water heating, and lighting systems) to achieve about 40% reductions in home thermal and lighting energy consumption will cost roughly \$2 - \$8 per ft² of conditioned floor area."² Obviously, the cost of construction (excluding land) for a new single-family home is an order of magnitude higher (e.g. \$150 to \$250 per ft² or more).

This power of energy efficiency drove California to target zero net energy design for all new residential buildings by 2020, and all new commercial structures (and 50% of existing commercial structures) by 2030. Hawai'i can deliver the same benefits and protections to its consumers.

To ensure that homes are built with the consumer's bottom line in focus, we ask that the Committee pass this bill and empower the State Building Code Council to adopt net zero energy capable design standards for all new single-family homes.

Thank you for this opportunity to testify.

² Davis Energy Group, California Zero Net Energy Buildings Cost Study at 4 (2012), *available at* https://newbuildings.org/sites/default/files/PGE_CA_ZNE_CostStudy_121912.pdf.

From:	mailinglist@capitol.hawaii.gov
Sent:	Tuesday, February 7, 2017 11:04 PM
То:	EEPtestimony
Cc:	tika_bean@hotmail.com
Subject:	Submitted testimony for HB1249 on Feb 9, 2017 08:30AM

Submitted on: 2/7/2017 Testimony for EEP on Feb 9, 2017 08:30AM in Conference Room 325

Submitted By	Organization	Testifier Position	Present at Hearing
Erica Scott	Individual	Support	No

Comments: Aloha, my name is Erica Scott and I am a Makiki resident and I strongly support this bill.

Please note that testimony submitted <u>less than 24 hours prior to the hearing</u>, improperly identified, or directed to the incorrect office, may not be posted online or distributed to the committee prior to the convening of the public hearing.

From:	mailinglist@capitol.hawaii.gov
Sent:	Tuesday, February 7, 2017 8:05 PM
То:	EEPtestimony
Cc:	john.from.stl@alumni.stanford.edu
Subject:	Submitted testimony for HB1249 on Feb 9, 2017 08:30AM

Submitted on: 2/7/2017 Testimony for EEP on Feb 9, 2017 08:30AM in Conference Room 325

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

Comments: I support House Bill 1249. Energy efficiency makes good sense for all of us. None of us want to buy a home that wastes energy and money. A net zero energy home makes use of the cheapest and cleanest form of energy in Hawaii, by becoming as energy efficient as it can be. Please pass this bill to make sure that we all benefit from homes that will be built to 21st century standards.

Please note that testimony submitted <u>less than 24 hours prior to the hearing</u>, improperly identified, or directed to the incorrect office, may not be posted online or distributed to the committee prior to the convening of the public hearing.

From:	mailinglist@capitol.hawaii.gov
Sent:	Tuesday, February 7, 2017 5:14 PM
То:	EEPtestimony
Cc:	douglasperrine@yahoo.com
Subject:	*Submitted testimony for HB1249 on Feb 9, 2017 08:30AM*

Submitted on: 2/7/2017 Testimony for EEP on Feb 9, 2017 08:30AM in Conference Room 325

Submitted By	Organization	Testifier Position	Present at Hearing
Douglas Perrine	Individual	Support	No

Comments:

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From:	mailinglist@capitol.hawaii.gov
Sent:	Tuesday, February 7, 2017 4:28 PM
То:	EEPtestimony
Cc:	stuart@well.com
Subject:	Submitted testimony for HB1249 on Feb 9, 2017 08:30AM

Submitted on: 2/7/2017 Testimony for EEP on Feb 9, 2017 08:30AM in Conference Room 325

Submitted By	Organization	Testifier Position	Present at Hearing
Stuarat Karlan	Individual	Comments Only	No

Comments: I support House Bill 1249. Energy efficiency makes good sense for all of us. None of us want to buy a home that wastes energy and money. A net zero energy home makes use of the cheapest and cleanest form of energy in Hawaii, by becoming as energy efficient as it can be. Please pass this bill to make sure that we all benefit from homes that will be built to 21st century standards.

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From:	mailinglist@capitol.hawaii.gov
Sent:	Tuesday, February 7, 2017 3:22 PM
То:	EEPtestimony
Cc:	mendezj@hawaii.edu
Subject:	*Submitted testimony for HB1249 on Feb 9, 2017 08:30AM*

Submitted on: 2/7/2017 Testimony for EEP on Feb 9, 2017 08:30AM in Conference Room 325

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

Comments:

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From:	mailinglist@capitol.hawaii.gov
Sent:	Tuesday, February 7, 2017 12:48 PM
То:	EEPtestimony
Cc:	june.chee@kupuhawaii.org
Subject:	Submitted testimony for HB1249 on Feb 9, 2017 08:30AM

Submitted on: 2/7/2017 Testimony for EEP on Feb 9, 2017 08:30AM in Conference Room 325

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

Comments: I support House Bill 1249. Energy efficiency makes good sense for all of us. None of us want to buy a home that wastes energy and money. A net zero energy home makes use of the cheapest and cleanest form of energy in Hawaii, by becoming as energy efficient as it can be. Please pass this bill to make sure that we all benefit from homes that will be built to 21st century standards.

Please note that testimony submitted <u>less than 24 hours prior to the hearing</u>, improperly identified, or directed to the incorrect office, may not be posted online or distributed to the committee prior to the convening of the public hearing.

From:	mailinglist@capitol.hawaii.gov
Sent:	Monday, February 6, 2017 8:10 PM
То:	EEPtestimony
Cc:	pulermq@gmail.com
Subject:	*Submitted testimony for HB1249 on Feb 9, 2017 08:30AM*

Submitted on: 2/6/2017 Testimony for EEP on Feb 9, 2017 08:30AM in Conference Room 325

Submitted By	Organization	Testifier Position	Present at Hearing
RuthMarie Quirk	Individual	Support	No

Comments:

Please note that testimony submitted <u>less than 24 hours prior to the hearing</u>, improperly identified, or directed to the incorrect office, may not be posted online or distributed to the committee prior to the convening of the public hearing.

EEPtestimony

From:	taniahoward@comcast.net	
Sent:	Tuesday, February 7, 2017 4:13 PM	
То:	EEPtestimony; info@blueplanetfoundation.org	
Subject:	House Bill 1249	

Dear Lawmakers,

Please support House Bill 1249. Energy efficiency makes good sense for all of us. None of us want to buy a home that wastes energy and money. A net zero energy home makes use of the cheapest and cleanest form of energy in Hawaii, by becoming as energy efficient as it can be. Please pass this bill to make sure that we all benefit from homes that will be built to 21st century standards. Nearly 50% of the energy consumed in the country is through the heating, cooling and lighting of buildings.

The good news is that this is also the easiest area of energy consumption to address, as long as good building standards are in place.

Energy-efficient building standards represent good planning for the future and will be seen as foresighted.

Thank you for your time and for what you do.

Kind regards,

Tania Howard

Kamuela, HI

Hello esteemed House members,

I'm writing in support of HB 1249, which would require that new homes be built to net zero standards (the most energy efficient homes possible). This home building standard would help our state and its residents become economically resilient by not being subject to very expensive and wildly fluctuating energy bills. It would help our state move toward energy independence, allowing us to keep more of our own money in our state, rather than exporting that cash to buy foreign oil. Through the multiplier effect, keeping that money in Hawaii's economy means more jobs for residents of Hawaii. It would reduce pollution and keep our air cleaner.

You may hear testimony from special interests arguing against this, and I encourage you to see that that's just what it is--special interests protecting their financial stake. However, with these special interests, when their financial stake wins, the rest of us lose, so I encourage you to do Hawaii residents proud and make this bill a reality.

Thank you, -Scott





P.O. Box 37158, Honolulu, Hawai`i 96837-0158 Phone: 927-0709 henry.lifeoftheland@gmail.com

COMMITTEE ON ENERGY & ENVIRONMENTAL PROTECTION Rep. Chris Lee, Chair Rep. Nicole E. Lowen, Vice Chair

DATE: Thursday, February 9, 2017 TIME: 8:30 am PLACE: Conference Room 325

RE: HB 1249 RELATING TO ENERGY EFFICIENCY.

SUPPORT

Aloha Chair Lee, Vice Chair Lowen, and Members of the Committee

Requires the state building code council to adopt net zero energy capability standards for new single-family residential construction. Requires all new single-family residential construction to be net zero capable by 1/1/2019.

PROPOSED AMENDMENT: **"§107- Energy efficiency; net zero energy capability standards; adoption.** No later than December 31, 2018, the council shall adopt net zero energy capability standards intended to ensure that new single-family residential construction shall maximize energy efficiency opportunities, such that in the council's estimation it would generally become more cost-effective to generate on-site renewable energy rather than to further increase the efficiency of the home. <u>The council shall extend the net zero energy capability standards to</u> <u>duplexes by December 31,2020, small commercial buildings by December 31, 2025, all</u> <u>commercial buildings by December 31, 2030, and all buildings by December 31,2035.</u> Such standards may be amended by the council thereafter from time to time as the council deems necessary."

Mahalo, Henry Curtis Executive Director



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PRESIDENT-ELECT DEAN UCHIDA SSFM INTERNATIONAL, INC.

VICE PRESIDENT MARSHALL HICKOX HOMEWORKS CONSTRUCTION, INC.

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TREASURER MICHAE WATANABE JW, INC.

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SPECIAL APPOINTEE-BUILDER MARK KENNEDY HASEKO CONSTRUCTION MANAGEMENT GROUP, INC.

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Testimony to the House Committee on Energy & Environmental Protection February 9, 2017 8:30 am Conference Room 325

RE: HB 1249 – Relating to Energy Efficiency

Chair Lee, Vice-Chair Lowen, and members of the Committee:

My name is Gladys Quinto Marrone, CEO of the Building Industry Association of Hawaii (BIA-Hawaii). Chartered in 1955, the Building Industry Association of Hawaii is a professional trade organization affiliated with the National Association of Home Builders, representing the building industry and its associates. BIA-Hawaii takes a leadership role in unifying and promoting the interests of the industry to enhance the quality of life for the people of Hawaii.

BIA-Hawaii is in opposition to HB 1249, Relating to Energy Efficiency. This bill would require the state building code council to adopt net zero energy capability standards for new single-family residential construction. This bill would also require all new single-family residential construction to be net zero capable by 1/1/2019.

Most homes are not constructed to be fully-customized with respect to the individual energy-using habits of the homebuyer. To achieve net-zero capability in construction, the home would need to built fully customized. Energy-saving features are based on the end-user. If a person uses lots of energy vs. one who uses very little, the design of the house would need to be radically different.

Further, most homes in Hawaii aren't large enough to potentially achieve true netzero. This would require a substantial PV system, along with a net metering agreement with the electricity provider (HECO) and high level insulation, along with other energy saving items. In many cases, there would simply not be enough space on the roof for the system size required to attain net-zero. Even if the homebuyer were to use a photovoltaic (PV)/battery-storage system, it would be unrealistic. Assuming a \$340/month electric bill, a sufficient PV system with batteries would cost approximately \$55,000 - \$70,000. That system would not work under prolonged periods of cloud cover, so the user would still need backup power. The useful life of the batteries in such a system would only be about 10 years, so it would not benefit the homeowner economically. The other consideration is again, roof space, because a system with batteries requires more PV capacity than a netmetering system.

We appreciate the opportunity to express our views on this matter.



From:	mailinglist@capitol.hawaii.gov
Sent:	Wednesday, February 8, 2017 10:34 PM
То:	EEPtestimony
Cc:	geryll@hawaii.edu
Subject:	*Submitted testimony for HB1249 on Feb 9, 2017 08:30AM*

Submitted on: 2/8/2017 Testimony for EEP on Feb 9, 2017 08:30AM in Conference Room 325

Submitted By	Organization	Testifier Position	Present at Hearing
Geryll Anthony Agno	Individual	Support	No

Comments:

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From:	mailinglist@capitol.hawaii.gov
Sent:	Wednesday, February 8, 2017 6:18 PM
То:	EEPtestimony
Cc:	lisamarten@hawaii.rr.com
Subject:	Submitted testimony for HB1249 on Feb 9, 2017 08:30AM

Submitted on: 2/8/2017 Testimony for EEP on Feb 9, 2017 08:30AM in Conference Room 325

Submitted By	Organization	Testifier Position	Present at Hearing
Lisa Marten	Individual	Support	No

Comments: Dear Chair Lee, Vice Chair Lowen and members of the EEP, I urge you to pass HB1249. This law will ensure a transition to new building standards that save home owners dollars. Collectively, these homes will also reduce the amount of carbon emitted by our State, thus slowing climate change. Additionally, by reducing the total demand for energy, we will be able to import less oil and keep more resources in our State economy. Mahalo, Lisa Marten

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