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Statement of
LUIS P. SALAVERIA
Director
Department of Business, Economic Development, and Tourism
before the
HOUSE COMMITTEE ON HOUSING

Thursday, February 16, 2017
9:30 a.m.
State Capitol, Conference Room 423

In consideration of
BILL NO HB1249, HD1
RELATING TO ENERGY EFFICIENCY.

Chair Brower, Vice Chair Nakamura, and members of the Committee.

The Department of Business, Economic Development, and Tourism (DBEDT) opposes HB1249, HD1, which requires that DBEDT convene a working group to develop strategies and methods to maximize energy efficiency in residential dwellings and to develop energy disclosure standards for new home sales.

We do not have the resources to staff a working group, nor do we have the expertise to conduct research and analyses require to support the working group. Many of the concerns identified in this bill already are addressed by the statutorily established State Building Code Council (SBCC) so that HD1 would replicate much of the work under the SBCC. The SBCC is composed of representatives such as design professionals, private sector businesses and associations, state and county agency representatives, and county building code officials. Building code updates under the SBCC require much technical review and discussion before each code is updated. In addition, the SBCC provides annual reports to the legislature.

The concerns noted in the bill, as well as additional measures, have been discussed by the SBCC which has approved the updated 2015 International Energy

Conservation Code (IECC 2015). The IECC 2015 address residential and commercial buildings and is 30 to 33 percent more efficient than the 2006 International Energy Conservation Code now in effect. The US Department of Energy's Pacific Northwest National Laboratory estimates the cost-effectiveness of the 2015 IECC residential code provisions to have a simple payback of 4.3 years.

Finally, regarding Section 2 of HD1, we recommend that for newly constructed homes the design professional responsible for the design of the residential dwelling, and most familiar with the details of the dwelling, provide an estimated typical monthly operating cost for a family of four. The design professional also should be required to certify the estimated energy use for the new residential dwelling and to use his/her professional stamp on the certification statement.

Thank you for the opportunity to testify.

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February 16, 2017

The Honorable Tom Brower, Chair
House Committee on Housing
State Capitol, Room 423
Honolulu, Hawaii 96813

RE: H.B. 1249, H.D.1, Relating to Energy Efficiency

HEARING: Thursday, February 16, 2017, at 9:00 a.m.

Aloha Chair Brower, Vice-Chair Nakamura, and Members of the Committee:

I am Myoung Oh, Government Affairs Director, here to testify on behalf of the Hawai'i Association of REALTORS® ("HAR"), the voice of real estate in Hawai'i, and its 8,300 members. HAR raises **concerns on Section 2** of H.B. 1249, H.D.1 which requires the disclosure of typical monthly operating energy costs, developed by DBEDT, to buyers of new homes.

While we applaud the initiative to engage homebuyers to be energy conscious, this measure will not assist buyers in making informed decisions based on a guestimate of energy consumption of a home. There are individual energy usage habits associated with consumption as well as household quantity.

HAR believes disclosures should be useful with the primary goal of informing and protecting consumers. Such disclosures should and already include association documents, deed restrictions, covenants and restrictions, development warranties, etc.

Further, we note that "new home" is not defined. We are unsure if new homes include single family homes in a planned community as defined in HRS 421J, single family homes in a condominium property regime as defined in HRS 514B.

Mahalo for the opportunity to testify.



HOUSE COMMITTEE ON HOUSING

Feb.16, 2017, 9:30 A.M.

Room 423

(Testimony is 3 pages long)

TESTIMONY IN SUPPORT OF HB 1249 HD 1

Aloha Chair Brower, Vice Chair Nakamura, and Committee Members:

Blue Planet Foundation strongly **supports** this bill, which will convene a working group to develop recommendations on energy efficiency in new single-family homes. At the end of this testimony, we respectfully suggest amendments to make the process more efficient and effective.

This bill **will lower housing costs** by maximizing the use of cost-effective energy efficiency in new single-family homes. As further documented below, this will benefit consumers by lowering the cost of owning a home. Unfortunately, the phrasing used in the original version of this bill has led to confusion**.** Testimony on the original version, and related bills, reflects an incorrect assumption that this bill would have required new homes to include energy generation (e.g. rooftop solar panels). That is incorrect. We are working with testifiers to rectify this misunderstanding, and we have proposed amendments below that would remove the reference to "net zero energy," while maintaining the focus on energy efficiency. We are also conferring with experts on how to further refine the definition of maximum cost-effective energy efficiency. We hope that this bill will move forward and allow that process to continue.

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 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

[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 *theoretically* adding electricity generation to a home. Thus, it is a standard based on cost-effectiveness; it is not a standard based on the actual energy generation in a home.

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.

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 ft^2 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 ft^2 or more). In the context of monthly mortgage payments, savings from cost-effective efficiency are expected to far outweigh any additional construction cost.

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.

SUGGESTED AMENDMENTS

The original version of this bill would have directed the State Building Code Council to adopt net zero energy *capable* design standards for all new single-family homes. In other words, the existing Energy Code (adopted by the State Building Code Council) would be amended to ensure that new homes used the maximum amount of energy efficiency. (Homes would not need to actually generate energy and become net zero in a true sense).

HD1 instead convenes a working group to examine potential energy and building codes, and to examine the issue of disclosing energy costs to prospective buyers. With respect to making a recommendation on codes, we suggest that the working group recommendation should be made directly to the State Building Code Council, which has the expertise to decide which portions of the code to adopt or amend. We believe that this is a more efficient and effective process for the working group.

[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.

We also suggest that the committee may want to explore whether Hawaii Energy would be a better fit to lead this working group process. Hawaii Energy is engaged by the Public Utilities Commission to work on energy efficiency issues. They focus solely on energy efficiency, and they regularly interact with the State Building Code Council. We suggest inquiring with Hawaii Energy on their capacity and interest in leading the group. DBEDT would obviously be a useful participant in the group. To implement these suggestions, we propose the following amended language (insertions indicated by underlining; for readability, deletions are not shown):

SECTION 3. (a) The department of business, economic development, and tourism shall convene a working group to develop strategies and methods to maximize the energy efficiency of residential dwellings in Hawaii. The working group shall be composed of concerned citizens and representatives of affected businesses and energy-related industries, including but not limited to the Public Utilities Commission's Public Benefits Fee Administrator.

(b) The working group shall make recommendations on the production of reports to consumers and home buyers of the typical monthly cost of energy consumption of new homes for sale, and report to the legislature on the working group's progress and findings twenty days before the convening of the legislature in 2018.

(c) The working group shall develop recommendations on building and energy codes and standards intended to ensure that new single-family residential construction shall maximize cost-effective energy efficiency opportunities. For the purpose of this subsection, maximizing energy efficiency shall mean reaching efficiency levels such that it would generally become more cost-effective to theoretically add generation to the home, rather than further increasing the efficiency of the home. These recommendations shall be presented to the State Building Code Council no later than January 31, 2018. Thereafter, the working group shall assist the State Building Code Council in its review of those recommendations and potential amendments.

(d) The working group shall be exempt from the requirements of chapter 92.

(e) The working group shall terminate no later than July 1, 2018.

Thank you for this opportunity to testify.

Email: communications@ulupono.com

HOUSE COMMITTEE ON HOUSING
Thursday, February 16, 2017 — 9:30 a.m. — Room 423

Ulupono Initiative Strongly Supports HB 1249 HD 1, Relating to Energy Efficiency

Dear Chair Brower, Vice Chair Nakamura, 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 reduce waste. 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 1249 HD 1, which discloses typical monthly operating costs for all new home sales and establishes an energy efficiency working group, because it aligns with our goal of increasing the production of clean, renewable energy in Hawai'i.

For energy efficiency to be successful, we need educated and motivated homeowners to actively practice energy efficiency in their daily purchases and behaviors. By providing new homeowners with expected operational costs from the start, this can help them to think about how best to invest in reducing their energy and water costs for their own economic interest.

It is often helpful for potential homebuyers to have comparable sales prices for similar homes in the neighborhood before making a purchase. Similarly, it could be additionally beneficial to have comparable energy and water costs for similar sized homes in the neighborhood. This would further help the new homeowner understand how their effective they are in managing their costs.

As Hawai'i's energy issues become more complex and challenging, we appreciate this committee's efforts to look at policies that support renewable energy production.

Thank you for this opportunity to testify.

Respectfully,

Murray Clay
Managing Partner

Testimony before the House Housing Committee

By Michael Colón
Director, New Customer Initiatives
Hawaiian Electric Company, Inc.

LATE

Thursday, February 16, 2017
9:30 am
Conference Room 423

House Bill 1249 HD 1 – Relating to Energy Efficiency

Chair Brower, Vice Chair Nakamura and Members of the Committee:

My name is Michael Colón and I am testifying on behalf of Hawaiian Electric Company and its subsidiary utilities, Maui Electric Company and Hawaii Electric Light Company (collectively, the "Hawaiian Electric Companies").

House Bill 1249 HD 1 seeks to have the Department of Business, Economic Development, and Tourism to convene a working group to develop standards for reporting energy consumption to facilitate comparisons of energy consumption and costs by consumers and home buyers.

The Hawaiian Electric Companies recommend that the stakeholder group conduct a comprehensive technical and economic review and coordinate with the building code council and the Public Utilities Commission on final recommendations. The recommendations that come from the working group would serve as a strong underpinning to future legislative proposals to improve building code standards. It should be noted, that these recommendations may ultimately have tremendous impact on the Companies' future energy planning from both a generation and grid investment perspective. Therefore the Companies respectfully request that they be included as an integral member of the stakeholder working group.

The Companies are encouraged by an increased interest and effort to improve energy efficiency through various means, and see value in the potential grid benefits that may result from leveraging technologies to not only reduce costs for all customers, but also to provide ancillary grid services through various pricing and incentive mechanisms as they become available. The Public Utilities Commission has several open dockets to help the

Companies face the unique challenge of integrating increasing levels of distributed generation on isolated electric systems, and aggregated energy efficiency measures that can support demand response signals from the utility may help to address certain grid stability issues and enable greater adoption of renewables onto the grid. Therefore it is incumbent that the Companies maintain an active role in the development of such standards as they move forward.

The Hawaiian Electric companies are committed to generate or procure 100% of the electricity they provide to customers from renewable energy sources by 2045. The more we can work in sync with our stakeholders, the greater our chance of succeeding as a whole.

Thank you for the opportunity to testify.

Hawai'i Energy
YOUR CONSERVATION & EFFICIENCY PROGRAM

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

Before the House Committee on Housing
Thursday, February 16, 2017, 9:30 A.M., Room 423
HB 1249 HD 1: Relating to Energy Efficiency

LATE

Chair Brower, Vice-Chair Nakamura, and members of the committee, thank you for the opportunity to submit testimony on HB 1249 HD1. On behalf of the Hawai'i Energy program, I would like to testify in strong **support** for HB 1249 HD1 which will convene a working group to develop recommendations on energy efficiency in new single-family homes. 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.

One suggestion instead of having DBEDT convene the working group would be the SBCC in conjunction with other work being done in this area. The SBCC is comprised of representatives of the Counties, DBEDT, DLIR, the Building Industry Association, the Subcontractor's Association, the Structural Engineers Association, the American Institute of Architects, the State Fire Council, and the Comptroller.

A second suggestion is the removal of any references to net zero energy. That is not the intent of this bill and can cause confusion in the industry. The focus of this bill is maximizing investment in energy efficiency.

Thank you for the opportunity to testify on HB 1249 HD1.

Brian Kealoha
Executive Director
Hawai'i Energy