SB 2332

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TO THE SENATE COMMITTEE ON ENERGY AND ENVIRONMENT

THE TWENTY-FIFTH LEGISLATURE
REGULAR SESSION OF 2010

THURSDAY, JANUARY 28, 2010
3:00 P.M.

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

SENATE BILL NO. 2332 – RELATING TO ENERGY EFFICIENCY AND RENEWABLE ENERGY.

DESCRIPTION:

This measure proposes to modify Hawaii Revised Statutes Chapter 269 by adding a section that would require the creation and implementation of on-bill financing for certain residential energy efficiency or renewable energy related investments.

POSITION:

The Division of Consumer Advocacy ("Consumer Advocate") supports the intent of the measure, but has certain reservations and, thus, offers comments for the Committee's consideration.

COMMENTS:

The future security of Hawaii requires that we move more irreversibly away from imported fossil fuel for energy and toward indigenously produced renewable energy and an ethic of energy efficiency. Towards that end, the proposed measure appears to be a potentially useful measure in helping Hawaii towards its goal of moving towards greater use of energy efficiency and renewable energy technologies.

While the proposed program appears to be a potentially useful measure, it is preferable that the proposed measure be properly weighed and evaluated against other possible measures designed to facilitate Hawaii's migration towards greater levels of penetration of energy efficiency and renewable energy technologies. The money available in the public benefits fund is limited and ensuring that the proper balance is achieved for its use as proposed by all of the measures is in the public interest.

The Consumer Advocate will generally defer to the Public Utilities Commission (Commission) on the following, but, first, the proposed program would seem to require the Commission to act as a financial lender, which may raise issues that would need to be resolved before the proposed program could be implemented. Further, even if the issues related to the Commission serving in the role of a lender are addressed, it is unclear whether the Commission has available resources to design and implement the proposed program.

One possibility is that if the proposed program is identified as a desirable program, rather than the Commission, it might be determined that the measure should be implemented by the third-party administrator that is selected by the Commission to conduct the various energy efficiency programs as it relates to the Hawaiian Electric Companies. Additional consideration would be required to determine how customers of Kauai Island Utility Cooperative could benefit if the Commission is not the administrator of the proposed program.

Thank you for this opportunity to testify.

WRITTEN TESTIMONY OF CARLITO P. CALIBOSO
CHAIRMAN, PUBLIC UTILITIES COMMISSION
DEPARTMENT OF BUDGET AND FINANCE
STATE OF HAWAII
TO THE
SENATE COMMITTEE ON ENERGY & THE ENVIRONMENT
JANUARY 28, 2010

MEASURE: S.B. No. 2332
TITLE: Relating to Energy Efficiency and Renewable Energy

Chair Gabbard and Mem bers of the Committee:

DESCRIPTION:

This bill directs the Public Utilities Commission ("Commission") to adopt rules to allow public utility customers to finance purchases of energy-saving appliances and renewable energy technology through on-bill financing, backed by the public benefits fund.

POSITION:

The Commission appreciates the intent of this bill and would defer to the Legislature on the substance and merits of this bill should the Commission be required to implement "on-bill" financing programs for various renewable energy and energy efficiency expenditures for certain public utility customers as proposed in this bill; however, the Commission has concerns with this bill, which the Committee should be aware of before proceeding any further with this proposal.

COMMENTS:

- The Commission is concerned with the considerable amount of cost that the public benefits fee will likely have to support to implement the contemplated programs. Either the per kilowatt/hour public benefits fee surcharge to utility customers will need to be raised or these "on-bill" financing programs will have to be implemented at the expense of other demand-side management programs such as the Residential Efficient Water Heating Program, Commercial and Industrial Customized Rebate Program, and the Seawater District Cooling Project that are currently being funded in part with the public benefits fee.

- It does not appear that any review or analysis of the costs and effectiveness of the proposed "on-bill" financing programs has been undertaken to support the proposed programs as the bill does not provide for a cost study to examine what the impacts will be on the public benefits fee to implement an on-bill financing program or the programs' cost-effectiveness in encouraging or facilitating the implementation of energy efficiency measures and renewable energy generation. It may be in the State's and electricity customers' best interest to research and understand the cost and effectiveness of the proposed programs before requiring their implementation.

Thank you for the opportunity to testify.

Testimony Before the Senate Committee
On
Energy & Environment

January 28, 2010 (3:00 PM)

S.B. 2332 RELATING TO ENERGY EFFICIENCY AND RENEWABLE ENERGY

By: Keith Block
Energy Services Department
Hawaiian Electric Company, Inc.

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

My name is Keith Block, and I represent Hawaiian Electric Company (HECO) and its subsidiary utilities, Hawaii Electric Light Company (HELCO) and Maui Electric Company (MECO). I appreciate the opportunity to present testimony on S.B. 2332.

S.B. 2332 directs the Public Utilities Commission to enact an on-bill financing program for residential electric utility customers to finance the purchase of energy efficient measures or renewable energy devices. Hawaiian Electric supports the intent of the bill to further the adoption of these measures. However, Hawaiian Electric and its subsidiaries have had some experience with on-bill financing programs and have the following comments.

In June 2006, the Legislature enacted Act 240, which required the Commission to implement a pilot project that allows customers to purchase solar water heating systems with no up-front costs and enables the customers to pay for the systems over time on the customers' electric bill. Per the direction of the Commission, Hawaiian Electric and its subsidiaries implemented the SolarSaver Pilot Program in July 2007 and installed over 500 solar water heating systems under this program through December 2009.

A subsequent evaluation of the pilot program conducted by an independent third-party indicated that the SolarSaver Pilot Program was complicated to administer as it required close coordination with a variety of departments within the Hawaiian Electric Companies, along with independent solar contractors, notaries, and the State Bureau of Conveyances. The evaluation of this program also indicated that it was not likely that the SolarSaver Pilot Program was cost-effective given the high administrative burden, the costs of which are passed on to utility ratepayers.

Thus, it is the nature of these types of on-bill financing programs to be very expensive. The current bill proposes to further increase the complexity of the program by substantially increasing the number and types of measures that would be covered by on-bill financing.

Thank you for this opportunity to testify on this proposed bill.

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SENATE COMMITTEE ON ENERGY AND ENVIRONMENT

January 28, 2010, 3:00 P.M.

(Testimony is 1 page long)

TESTIMONY IN STRONG SUPPORT OF SB 2332

Aloha Chair Gabbard and Members of the Committee:

The Sierra Club, Hawai`i Chapter strongly supports SB 2332, which requires the PUC to develop an on-bill financing program to remove the upfront cost barriers to acquiring energy efficient or renewable energy systems.

Residents want to do what's right, but they also have to live within a budget. That's why on-bill financing is such a popular concept. When a customer upgrades a refrigerator, installs a solar hot water heater, or undertakes some other efficiency measure, the utility pays for it and then recoups the cost gradually over time in the customer's monthly energy bill. The approach spares the customer the sticker shock of springing for the improvement all at once. It also gives the customer the opportunity to reduce energy use, which lowers electricity charges and offsets at least some of monthly cost of the efficiency installation.

This is not a new concept. Massachusetts and Rhode Island have used this approach for almost two decades. Connecticut and California have large on-bill programs.

Thank you for this opportunity to provide testimony.

 Robert D. Harris, Director

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January 27, 2010

The Honorable Mike Gabbard, Chair
Senate Committee on Energy and Environment
State Capitol, Room 225
Honolulu, Hawaii 96813

RE: S.B. 2332 Relating to Energy Efficiency and Renewable Energy

HEARING: Thursday, January 28, 2010 at 3:00 p.m.

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

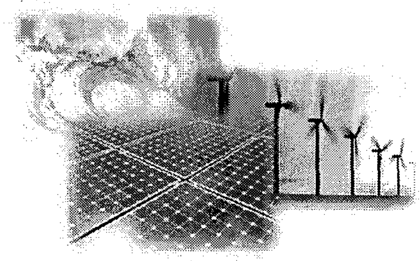
I am Myoung Oh, Government Affairs Director, here to testify on behalf of the Hawai'i Association of REALTORS® ("HAR"), the voice of real estate in Hawai'i, and its 8,800 members in Hawai'i. HAR **supports the intent** of S.B. 2332.

This bill proposes to allow the PUC to develop an on-bill financing (or "pay as you save") program for energy efficiency improvements. HAR believes that this proposal is an innovative approach that would provide an incentive for homeowners to purchase energy efficient improvements for their homes. However, we feel that homeowners' ability to pay for large-scale renewable energy technologies also must be considered.

HAR notes that the proposed "pay as you save" initiative should also consider whether and how a financed appliance or device will be treated upon subsequent sale or lease of the property. The bill may leave some unanswered questions as written, such as whether an owner or occupant who finances an energy efficient appliance or solar energy device under the program would be required to return the device after the sale or lease of the property, or whether the appliance or device could be transferred to the subsequent owner or occupant of the property.

Mahalo for the opportunity to testify.

blue planet
FOUNDATION



SENATE COMMITTEE ON ENERGY AND ENVIRONMENT
January 28, 2010, 3:00 P.M.
Room 225

(Testimony is 3 pages long)

TESTIMONY IN SUPPORT OF SB 2332

Chair Gabbard and members of the Committee:

The Blue Planet Foundation supports Senate Bill 2332, a measure directing the Public Utilities Commission to establish an on-bill financing program for residential electricity customers.

On-bill financing—or "pay as you save" financing—is one of the most powerful tools to increase adoption of energy efficiency and clean energy investments. Like the property assessed clean energy financing, on-bill financing overcomes the biggest hurdle to energy efficiency and clean energy adoption: the up-front cost. By eliminating the initial cost and enabling residents to pay off the investment directly from the energy savings over time, adoption of efficiency and clean energy will accelerate.

Consumers have proven to be terribly myopic in their purchasing decisions when it comes to energy saving technologies. Despite the environmental and long-term economic advantages of converting to photovoltaic power, a miniscule percentage of Hawai'i homes take advantage of this technology. Even less expensive purchases, like high efficiency refrigerators, are passed over because of their initial cost. By eliminating the up-front cost and enabling residents to pay for the investment through the energy savings over time, adoption of efficiency and clean energy will accelerate.

An examination of some of the economic barriers present in the diffusion of energy efficiency technologies provides insight into the challenges of greater adoption of efficient appliances and photovoltaic. Empirical studies examining the purchase of energy-saving devices reveal that high initial investment costs—regardless of the money savings from reduced electricity use—fosters to a tendency to avoid energy saving innovations. These decisions can result in outcomes that are economically suboptimal considering likely investment alternatives available

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to the decision maker. By foregoing certain energy efficiency investments, individuals demonstrate implied discount rates that are frequently an order of magnitude or higher over the prevailing discount rate. The table on page 5 of this testimony shows a sample of implied discount rates from a literature review compiled by Sanstad, et al.[1]

A 1983 study on refrigerators[2] is notable for being one of the first to use very specific data and a simple technique. They examined two refrigerator models sold by the same national retailer between 1977 and 1979. The two refrigerators were identical in nearly every way except their energy use and cost: one used 410 kilowatt-hour (kWh) per year less electricity but cost $60 more. Using a 6% discount rate and a 20-year lifetime, the more efficient refrigerator saved energy at an electricity cost of just over one cent per kWh—lower than electricity prices prevailing in every state at the time. Despite being widely advertised and being recommended by a prominent consumer magazine, the energy-efficient refrigerator was purchased by customers less frequently than the less expensive inefficient model. Using regional electricity cost data, Meier and Whittier calculated the implied discount rate by these purchases, which varied between 34% and 59%, depending on the region's prevailing residential electricity rate.

Average Implicit Discount Rates in Energy Efficient Investments (Sanstad, et al., 1995)

Study	End-use	Average rate
Arthur D. Little (1984)	Thermal shell measures	**32%**
Cole and Fuller (1990)	Thermal shell measures	**26%**
Goett (1978)	Space heating system and fuel type	**36%**
Berkovec, Hausman and Rust (1983)	Space heating system and fuel type	**25%**
Hausman (1979)	Room air conditioners	**29%**
Cole and Fuller (1980)	Refrigerators	**61-108%**
Gately (1980)	Refrigerators	**45-300%**
Meier and Whittier (1983)	Refrigerators	**34-58%**
Goett (1983)	Cooking and water heating fuel type	**36%**
Goett and McFadden (1982)	Water heating fuel type	**67%**

The issues that give rise to the "energy-efficiency paradox" are likely to be more pronounced in the decision to purchase a photovoltaic system, with high initial investment costs and lengthy

[1] Sanstad, A. H., Blumstein, C., & Stoft, S. (1995). Viewpoint: How high are option values in energy-efficiency investments? *Energy Policy*, 23, 739-743.
[2] Meier, A., and Whittier, J. (1983). Consumer Discount Rates Implied by Purchases of Energy-Efficient Refrigerators. *International Journal of Energy*, 8(12), 957-962.

payback times. Expanding the on-bill financing program to energy efficient appliances (such as high efficiency refrigerators) and residential photovoltaic systems will help to eliminate this barrier and make these money-saving technologies more accessible to local residents.

Since this measure contemplates applying some of the public benefits fee to the on-bill financing program, we hope that this committee consider measures to increase the 1% public benefits fee that that the electric utility currently pays to 2% or higher. Such an increase in funding for energy efficiency will enable residents to continue to take advantage of rebates and other incentives to invest in smart energy choices.

Finally, while Blue Planet fully supports this measure and other clean energy measures providing further policy direction and demands on the public utilities commission (PUC), we hope that the legislature also ensures the PUC receives its full share of the PUC special fund to adequately staff and oversee its many assignments and dockets.

Thank you for the opportunity to testify.

HAWAII RENEWABLE ENERGY ALLIANCE
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TESTIMONY OF WARREN BOLLMEIER ON BEHALF OF THE HAWAII RENEWABLE ENERGY ALLIANCE BEFORE THE SENATE COMMITTEE ON ENERGY AND ENVIRONMENT

SB 2332, RELATING TO TAXATION

January 28, 2010

Chair Gabbard and Vice-Chair English and members of the Committee, I am Warren Bollmeier, testifying on behalf of the Hawaii Renewable Energy Alliance (HREA). HREA is an industry-based, nonprofit corporation in Hawaii established in 1995. Our mission is to support, through education and advocacy, the use of renewables for a sustainable, energy-efficient, environmentally-friendly, economically-sound future for Hawaii. One of our goals is to support appropriate policy changes in state and local government, the Public Utilities Commission and the electric utilities to encourage increased use of renewables in Hawaii.

The purpose of SB 2332 is to direct the public utilities commission to enact an on-bill financing program whereby residential electric utility customers may finance purchases of energy efficient or renewable energy devices and systems through their regular electric utility bills. HREA supports the intent of this measure and provides the following comments for consideration by the committee:

1. <u>Existing On-Bill Financing Programs</u>. The Hawaiian Electric Company ("HECO") has completed a two-year Solar Saver Program Pilot Program ("SSP") for solar hot water systems. The Pilot Program, based on the PAYS® ("Pay As You Save") concept, is currently under review by the Commission. We believe the SSP has been a success, and should be expanded. We also note that the Commission has transferred the responsibility of the SSP to the Public Benefits Administrator. The Kauai Island Utility Cooperative ("KIUC") has also implemented a successful on-bill financing program.

2. <u>Potential for Application to Energy Efficiency</u>. The PAYS® concept, created by Harlan Lachman and Paul Ciello of the Energy Efficiency Institute in Coldwater, Vermont, was initially applied to and has been successful with energy efficiency technologies. Thus, we support their inclusion in this measure.

3. <u>What about other Renewable Technology Options</u>. While other renewable technologies can be more expensive than energy efficiency and solar hot water, we support their inclusion as potential on-bill financing options. For example, we believe there could be a combination of other incentives (such as tax credits and grants) that could help buy down the initial costs, and thereby keep the payment period to an acceptable number of years. We also note that under the PAYS® concept, the payments are "tied" to the "meter" or "utility account," such that the payments can be transferred from one homeowner to another. The PAYS® approach also facilitates "renter/landlord" applications.

Thank you for this opportunity to testify.