



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

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Statement of
THEODORE E. LIU
Director
Department of Business, Economic Development, and Tourism
before the
**HOUSE COMMITTEE ON
ENERGY & ENVIRONMENTAL PROTECTION**
Tuesday, January 29, 2008
8:30 a.m.
State Capitol, Conference Room 312

in consideration of
HB3063
RELATING TO PAY AS YOU SAVE.

Chair Morita, Vice Chair Carroll, and Members of the Committee.

The Department of Business, Economic Development and Tourism (DBEDT) supports HB3063, which is an Administration measure to expand the present Pay As You Save to residential electric utility customers and allow them to purchase a photovoltaic system with no upfront payments and to pay the cost of the system or systems over time on the customer's electricity bill.

This proposal amends the present Pay As You Save statute by including photovoltaics for residential use as part of a pilot project established by Act 240, SLH 2006. The present Pay as You Save addresses only residential solar water heating and only recently has been implemented by the various utilities. As with the residential solar water heating Pay as You Save program, the photovoltaics Pay as You Save program requirements will be subject to input by any interveners in a docket established for this particular proposal and subject to review and oversight by the Public Utilities Commission.

As with solar water heating, the upfront cost for a photovoltaic system can be prohibitive for home owners. With Pay as You Save, these costs can be spread over time to make photovoltaic systems accessible to home owners. With the rising cost of electricity, photovoltaic systems, using Pay as You Save, will allow home owners to purchase and install photovoltaic systems to reduce their monthly utility bills by amortizing payments on a monthly basis. Photovoltaic systems use the sun to generate electricity for direct use by the home owner. Photovoltaic systems are an off-the-shelf and readily available technology that uses solar energy to reduce the State's dependence on fossil fuel.

Thank you for the opportunity to offer these comments.

BOB JACOBSON
Councilmember

Chair, Environmental Management Committee
Vice-Chair, Finance Committee
Vice-President Hawai'i State Association of Counties



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HAWAI'I COUNTY COUNCIL

County of Hawai'i

January 26, 2008

To: COMMITTEE ON ENERGY & ENVIRONMENTAL PROTECTION,

Rep. Hermina M. Morita, Chair and Members

Rep. Mele Carroll, Vice Chair, Rep. Ken Ito, Rep. Roland D. Sagum, III

Rep. Jon Riki Karamatsu, Rep. Scott K. Saiki

Rep. Michael Y. Magaoay, Rep. Cynthia Thielen

DATE: Tuesday, January 29, 2008, TIME: 8:30 am

Regarding Testimony in favor of:

HB 3063

RELATING TO PHOTOVOLTAIC SYSTEMS
FOR PAY AS YOU SAVE.

Expands the successful "Pay As You Save" solar water heater program to photovoltaic systems that convert sunshine into electricity, allowing users to pay each month through their electricity bill.

Aloha Chair Morita and Members,

I want to express my support for HB 3063. I have lived off the grid and have used photovoltaic panels since 1982. Anything we can do to increase the amount of energy we can get from the sun is to be encouraged. The solar hot water program has proven to be effective. Grid connected solar power systems will make it easy for average consumers to enjoy and understand the real benefits of photovoltaic systems. The payment schedule would make it easier for many to reap the rewards of solar that have not been able to do so in the past. I would encourage you to also try to allow off the grid residents to enjoy tax benefits in some way from legislation you consider this year.

Mahalo!

District 6 ~ Upper Puna, Ka'u, and South Kona
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COMMITTEE ON ENERGY & ENVIRONMENTAL PROTECTION

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Rep. Mele Carroll, Vice Chair

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Rep. Jon Riki Karamatsu

Rep. Scott K. Saiki

Rep. Michael Y. Magaoay

Rep. Cynthia Thielen

HB 3063 - RELATING TO PHOTOVOLTAIC SYSTEMS FOR PAY AS YOU SAVE

January 29, 2008

State Capitol

Conference Room 312

415 South Beretania Street

Honolulu, HI 96813

TESTIMONY SUBMITTED BY

Joseph Saturnia

President

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Support for HB 3063 – RELATING TO PHOTOVOLTAIC SYSTEMS FOR PAY AS YOU SAVE

My name is Joseph Saturnia and I am President of Island Pacific Energy, a local renewable energy finance company. I am testifying in support of HB 3063, RELATING TO PHOTOVOLTAIC SYSTEMS FOR PAY AS YOU SAVE. I support the passage of this bill however to achieve the same level of success as the solar hot water program, the incentives for photovoltaic systems will need to be enhanced.

In Hawaii, the solar hot water program has been a huge success and is a model to encourage other renewable energy systems. Hawaii's solar hot water program has been successful because:

1. The initial investment is relatively small. Most consumers can afford a \$5,000 investment or qualify for financing.
2. The program offers a \$1,000 cash rebate from the local electric utility.
3. The payback (after incentives) is usually less than three years. The time to recover the investment is short enough that most consumers perceive the time to recover the investment as a reasonable time period.
4. The purchase and installation cost of a solar hot water system is low enough that most customers can full monetize the Federal and State tax credits.

When considering ways to encourage renewable energy systems, it is important to understand that not all types of renewable energy systems are the same. Solar thermal, photovoltaic, wind and biomass all have unique characteristics that require different types of incentives to be effective and achieve the desired outcome. To effectively encourage development, the appropriate incentive needs to be applied to the targeted renewable energy type. The incentives that contribute to the success of one type of renewable energy are necessarily applicable to another.

When comparing solar hot water systems and photovoltaic systems, the most important difference is the relatively low efficiency of photovoltaic systems vs. solar hot water systems. To achieve the same dollar amount of energy savings as hot water systems, photovoltaic systems cost up to four times more. This higher cost per dollar savings translates into higher financing costs and longer term loans. Two of the critical success factors of the solar hot water program were low cost and short payback period. In order to replicate the success of solar hot water in photovoltaic systems, the cost to the customer and payback period must be reduced.

A critical part of cost reduction in photovoltaic systems is the ability to fully utilize the tax credits. Customers that install hot water systems require annual incomes of only \$25,000 to fully utilize the state tax credits. Equivalent photovoltaic systems require annual incomes in excess of \$100,000 to fully utilize the state tax credits. Unfortunately, the higher the system cost, the less likely the customer can fully monetize the tax credits. Additionally, many of the customers who do earn enough to fully utilize the state tax credits have exhausted their state tax credit appetite through other tax credit programs such as ACT 221 investments. Even if a customer earns enough income to fully utilize the state tax credits, the

payback on photovoltaic systems is still a minimum of eight years, a full five years longer than solar hot water.

In order to achieve the same success in photovoltaic systems as solar hot water systems, it will be necessary to increase the incentives and enable more customers to fully utilize them. This will require a change to a higher, more easily monetized incentive such as rebates.

A number of states subsidize renewable energy systems through rebates. Rebates are refunds of a specific share of the cost or energy production of a renewable energy system. Rebates are generally considered the best form of incentives to encourage renewable energy. They give end users cash to offset the cost of installing renewable energy systems. They do not require the end users to have tax credit appetite and therefore level the playing field across economic status for customers who wish to install a renewable energy system.

The benefit of rebates over tax credits is threefold. First, consumers no longer need to have tax credit appetite to monetize the savings. The rebates are available to all users regardless of income. Second, by funding rebates through a surcharge on electricity, the increase in utility rates rewards renewable energy users because they use less grid power and it encourages the installation of renewable energy by others to avoid the higher utility rates. Finally, funding rebates with a surcharge on electric rates avoids the negative effects a tax credit has of reducing a government's income tax receipts.

Adoption of a rebate for photovoltaic systems would compensate for the differences between solar hot water and photovoltaic systems and be a critical factor in the success of a "pay as you save" program. It would overcome the shortcomings of the current system as applied to photovoltaic systems and would position photovoltaic systems to achieve the same level of success as solar hot water.

Conclusion

There are critical differences between solar hot water systems and photovoltaic systems. It is important to recognize these differences and structure programs that successfully encourage photovoltaic installations. I urge the committee as part of HB 3063 to include the necessary changes to incentives for photovoltaic systems to ensure the success of the program. Thank you for this opportunity to testify.

Joseph Saturnia

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Hawaii Solar Energy Association
Serving Hawaii Since 1977

TESTIMONY OF THE HAWAII SOLAR ENERGY ASSOCIATION
IN REGARD TO H.B. 3063
RELATING TO PHOTOVOLTAIC SYSTEMS FOR PAYS AS YOU SAVE
BEFORE THE
HOUSE COMMITTEE ON ENERGY & ENVIRONMENTAL PROTECTION
ON
TUESDAY, JANUARY 29, 2008

Chair Morita, Vice-Chair Carroll, my name is Richard Reed and I represent the Hawaii Solar Energy Assn. (HSEA). HSEA strongly supports the passage of H.B. 3063.

Senate Bill 2957, SD 2, HD 2, CD 1, Part IV, Section 13, enacted by the 2006 Hawaii State Legislature (Act 240), authorized the Public Utilities Commission (PUC) to implement a pilot project to be called the "solar water heating pay as you save program". The legislature found that solar water heating systems provide important public interest benefits, but the initial cost of these systems remains an up-front barrier that excludes, "many Hawaii residents".

The legislature further found that the renewable energy technologies income tax credit and the electric utility rebates for solar water heating systems have not provided sufficient incentive to overcome the up-front cost issue, "Especially for rental housing and homes in need of retrofit".

The specific elements of the pay as you save solar water heating pilot project as defined by Act 240 are designed to overcome the potential purchase objections associated with first cost. The explicit goal of the pay as you save concept is to encourage solar system purchases by homebuyers that are not motivated by conventional financial incentives, i.e. tax credits and/or rebates, who do not qualify for conventional financing or have had a solar loan request previously rejected, or by renters that heretofore have had no financial motivation to purchase this energy saving device.

The implicit assumption, or hypothesis, in this legislation is that the potential market for retrofit solar water heating systems in Hawaii remains much larger than the actual number of systems purchased each year, and that the up-front capital cost is the primary stumbling block for those that have not yet purchased a system.

The record will reflect that HSEA argued before the legislature in 2006, that residential photovoltaic solar electric systems- which cost many times more than a solar water heating systems - deserved to be added to this pilot. It is clear that the initial capital cost of residential PV systems is the KEY obstacle to increased market penetration.

Unlike the Demand-Side Management Programs (DSM) that will be transferring from our electric utilities (with the exception of KIUC) in 2008, the Pay As You Save pilot – which HECO has renamed SolarSaver – will remain under utility company administration. In the current SolarSaver model, the contractor incurs all the upfront costs to install the system. He then awaits a utility company inspection and a check. The success or failure of the proposed PV pilot will depend in large measure on the timeliness of the reimbursement process.

One note for the record: HSEA hopes that the committee will make clear that Pay As You Save either does or does not refer to the specific provisions integral to the trademarked energy efficiency/renewables financing concept known as Pay As You Save® or PAYS®, developed by Harlan Lachman and Paul Cillo of the Energy Efficiency Institute, Inc. The trademark rights to PAYS® are vested in the non-profit organization PAYS America, which headquarters in Boston, MA.

PUC Docket No. 2006-0425, opened in October, 2006, was initiated to examine the issues raised by and contained in Act 240. Central to this investigation – at least in our mind - was whether or not the legislature had intended to require all the provisions of PAYS®, or just some of them. A plain reading of the law would indicate that the legislature did not intend to enact all the PAYS® provisions, yet there is some evidence to support a different interpretation. HSEA requests that the committee's intent and objective in regard to the PAYS® provisions be made explicit as this measure moves forward.

Thank you for the opportunity to testify.