

SB 1173



**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
**SENATE COMMITTEES ON
ENERGY AND ENVIRONMENT
AND
COMMERCE AND CONSUMER PROTECTION**
Thursday, February 5, 2009
2:45pm
State Capitol, Conference Room 225

in consideration of

**SB1173
RELATING TO ENERGY EFFICIENCY.**

SB1173 includes many provisions offered in SB871, the Administration's omnibus measure developed under the Hawaii Clean Energy Initiative and in partnership with our stakeholders. There are, therefore, many measures under SB1173 which we support; and there are other measures for which we note our concerns. We will summarize our position on the various elements of SB1173:

We support the proposed measures of SB1173 with regard to energy efficiency portfolio standards, which include the following:

- Establishing energy efficiency portfolio standards;
- Designating the Public Benefits Fee Administrator (PBFA) to conduct an energy efficiency assessment, articulating guidelines for the assessment, and appropriating \$500,000 from the Public Utilities Commission special fund for the PBFA to conduct the assessment;

We support some of the proposed measures of SB1173 with regard to energy efficient buildings, but differ on some measures as noted below:

- We prefer that energy efficiency reviews should be conducted by the PBFA and not the Energy Resources Coordinator (ERC). We have concerns about requiring all new homes constructed in the State or all older homes renovated in the State have an efficiency certification; this provision is not in SB871.
- We prefer that building commissioning guidelines be developed by the PBFA. We are concerned about the following requirements imposed under SB1173:
 - (2) Require a building owner, prior to receiving a certificate of occupancy, to submit a building commissioning report prepared by the designated commissioning agent; and
 - (3) Require a building owner to remedy any deficiencies indicated in the commissioning report within sixty days of receiving the report, and authorize the counties to assess fines and penalties against a building owner that does not comply.

We prefer SB871 with regard to building code provisions. SB871 provides the PBFA with \$600,000 from the public benefits fee to set up procedures for and conduct measurement and verification of buildings and homes constructed under the code to assess code compliance and building performance; conduct an analysis of the energy intensity of residential and commercial buildings built to code compared to baseline homes; conduct surveys of builders to determine actual costs associated with meeting code for residential and commercial buildings; assess the feasibility of implementing a net zero energy building code for residential and commercial construction; consider the costs and benefits of requiring certain provisions and technologies as part of the building code analysis; recommend technical code amendments to the International Energy Conservation Codes (IECC) in order to take advantage of Hawaii's climate; and provide annual reports with recommendations to the legislature.

Under the building code provisions, SB1173 requires that the code include "The latest edition of the International Energy Conservation Code within six months of its adoption by the International Code Council." SB1173 also requires each county to use the IECC, as updated, no later than six months after the adoption of the state building code. In addition, SB1173 appropriates \$600,000 in general funds to DBEDT to conduct building energy

efficiency review and commissioning guidelines. The department is concerned about the impact of this appropriation on the Executive Biennium Budget and any adverse impact on the priorities set forth in the Executive Biennium Budget for Fiscal Years 2009-2010.

With regard to SB1173 and Part III, relating to state building efficiency, we prefer SB871 which directs agencies with responsibilities for the design and construction of buildings and facilities shall benchmark every existing public building of a certain size or energy consumption. SB871 also directs the PBFA, using public benefit fees, to develop retrocommissioning guidelines. We have concerns relating to requirements in SB1173 calling for the ERC to establish performance targets for energy efficiency in existing state buildings that are thirty per cent higher than the most recent guideline established by the IECC for that type of building and that major retrofits or renovations shall achieve efficiencies of more than thirty percent higher than the IECC. We also have concerns about setting aside fifty percent of the moneys saved through efficiency and renewable energy system retrofitting projects to pay for any costs directly associated with administering energy efficiency and renewable energy system retrofitting programs incurred by the agency.

With regard to Part IV, on-bill financing for energy efficiency, and Part V, household appliances, which provides detailed program directions, we prefer SB871 which allows program details to be developed by the PUC and PBFA.

With regard to Part VI, net-zero energy buildings, we prefer SB871 which was developed with input from the Department of Taxation and provides language important for Department of Taxation administration of the proposed tax credit. We defer to the Department of Taxation. The bill also directs the ERC to submit a review of the tax credit; the Department of Taxation already provides an annual review and summary of all state tax

credits. In addition, Part VI includes an unspecified general fund appropriation to DBEDT. The department is concerned about the impact of this appropriation on the Executive Biennium Budget and any adverse impact on the priorities set forth in the Executive Biennium Budget for Fiscal Years 2009-2010.

With regard to Part VII, consumer information, we prefer SB871 which requires that, prior to the sale or leasing of property, property owners and lessors shall provide the utility bills for the most recent three month occupied period, unless the property does not have a utility account number. SB871 also calls for establishing an information program and allows program details for the consumer information program for energy efficient properties to be developed by the PUC and the PBFA. SB1173 provides a number of duties which include providing energy efficiency information on a property at the time of sale or lease, developing and providing information to banks and other lenders on the economics of energy efficient properties, establishing a database of information for realtors on energy efficiency on-line, and developing a report to a consumer on the property prior to the lease or sale of the property. We believe the straightforward requirement of utility bills and education programs to be developed by the PBFA rather than a "report" and "establishing a database of information" are desirable at this time.

With regard to Part VIII, low income household renter tax credit, we prefer the tax credit and refundable tax credit incentives offered in SB871. We defer to the Department of Taxation.

Thank you for the opportunity to offer this testimony.

LINDA LINGLE
GOVERNOR

JAMES R. AIONA, JR.
LT. GOVERNOR



KURT KAWAFUCHI
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SENATE COMMITTEE ON ENERGY & ENVIRONMENT AND
COMMERCE & CONSUMER PROTECTION
TESTIMONY REGARDING SB 1173
RELATING TO ENERGY EFFICIENCY

TESTIFIER: KURT KAWAFUCHI, DIRECTOR OF TAXATION (OR DESIGNEE)
DATE: FEBRUARY 5, 2009
TIME: 2:45PM
ROOM: 225

Among other things, this measure includes a new net income tax credit, the net zero building tax credit, and an amendment to an existing income tax credit for low-income household renters.

The Department of Taxation **prefers the Administration measure, SB 871.**

SECTION 13 – Net zero energy building tax credit – One problem with the proposed credit involves identifying which taxpayers qualify. The proposed section defines a builder as an owner, but then states that the taxpayer-builder must be a builder or an owner in order to claim the credit. Why use both terms when it appears that the taxpayer must own the net zero building in order to claim the credit? If a builder who is not an owner is allowed to take the credit, then why define the builder as the owner? Or, perhaps the owner and the builder differ simply in that the builder must own a building that is built or renovated to provide net zero energy use and the owner identified in subsection (b)(1) is an owner that has not built or renovated the building it owns. If it is this last interpretation, the Department does not understand the need to make that distinction.

Another problem with the proposed credit involves how often the credit is available. Subsection (b) provides that the taxpayer is allowed the credit if the building in question is a net zero energy building. Therefore, the credit appears to be available in each year that the building in question meets the definition of a net zero energy building, unless the requirement that the building have been built or renovated in the taxable year is somehow read into subsection (b) through the definition of "builder;" which would require ignoring that the term owner is used as a separate term from builder in subsection (b)(1).

If a building must be built or renovated during the same taxable year the credit is claimed, a third problem with the proposed credit involves what it means to renovate the building. What if the

building is already a net zero energy building and a renewable energy system is built onto the building? Is that enough of a renovation to allow the taxpayer to get what may be a second net zero energy building credit?

Another problem with this proposed credit involves the definition of a net zero energy building. The credit provides no guidance on how the Department should determine that the production of all energy (electricity, gas, etc.) exceeds the use by the occupants. Furthermore, the credit does not explain for how long the production of energy must exceed the use. If there is a spike in energy use that exceeds the building's energy production capacity for one day out of the entire year, is the building disqualified?

The Department highlights a final example of the problems with this credit as currently proposed, which involves the ability of the taxpayer to take other related deductions and credits based upon the same costs. Should a taxpayer be allowed to take a renewable energy technology tax credit for a system installed to help the taxpayer qualify for this credit? Should a business be allowed to deduct or depreciate expenses for making the necessary changes to the building in order to qualify for this credit? Currently, the credit may be taken without regard to any other tax benefit the taxpayer may claim.

There are other technical problems with the credit, including the unenforceable compliance with all applicable statutes, rules, and regulations requirement, the unnecessary refund language in subsection (e), as well as problems with administering the caps placed on the credit amounts in subsections (c) and (d). SB 871 provides a similar credit in Section 8 that lacks the interpretation and administration issues posed by this bill.

SECTION 17 – Low income household renter tax credit – The Department does not understand the proposed amendment to section 235-55.7(c). Section 235-55.7, HRS is already a refundable tax credit for anyone meeting two requirements: an adjusted gross income of less than \$30,000 and the payment of rent of more than \$1,000 during the taxable year. When a tax credit is refundable, a person with no tax liability is refunded the amount of the tax credit by the state as long as the refund exceeds \$1. The proposed amendment would allow a taxpayer with an adjusted gross income of less than \$20,000 to transfer their refundable tax credit to their landlord. Besides the fact that the Department is strongly against allowing any tax credit to be transferrable, the Department cannot understand why a person eligible for this refundable credit would elect to transfer it to his or her landlord.

PREFERENCE FOR ADMINISTRATION'S TAX PACKAGE—The Department prefers the comprehensive energy-related tax package contained in SB 871, which clarifies the renewable energy systems tax credits, as well as tax incentives for net-zero energy efficient buildings. The Administration's measure has been factored into the biennium budget and the financial plan.

OPPOSITION TO UNBUDGETED REVENUE LOSS— The Department cannot support the tax provisions in this measure because they are not factored into the budget. The Department must be cognizant of the biennium budget and financial plan. This measure has not been factored

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into either. Given the forecasted decrease in revenue projections, this measure would add to the budget shortfall.

REVENUE LOSS— DBEDT estimates the revenue loss for the net zero building tax credit at \$0.45 million in FY10 and \$0.9 million per year for FY11 through FY15. We concur with the DBEDT estimate.

LINDA LINGLE
GOVERNOR



RUSS K. SAITO
Comptroller

BARBARA A. ANNIS
Deputy Comptroller

**STATE OF HAWAII
DEPARTMENT OF ACCOUNTING
AND GENERAL SERVICES**

P.O. BOX 119
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TESTIMONY
OF
RUSS K. SAITO, COMPTROLLER
DEPARTMENT OF ACCOUNTING AND GENERAL SERVICES
TO THE
SENATE COMMITTEES
ON
ENERGY AND ENVIRONMENT
AND
COMMERCE AND CONSUMER PROTECTION
ON
February 5, 2009

S.B. 1173

RELATING TO ENERGY EFFICIENCY

Chair Gabbard, Chair Baker, and members of the Committees, thank you for the opportunity to testify on S.B. 1173.

The Department of Accounting and General Services (DAGS) has concerns about S.B. 1173.

In particular, this bill, at page 9, lines 11 to 13, requires that the latest edition of the International Energy Conservation Code be adopted as a state building code within six months of its adoption by the International Code Council. This is impractical. The state building code is not one but a suite of building codes, each patterned after a national or international standard code. These national or international codes, including building codes, residential building, existing building, fire, plumbing, electrical, elevator, mechanical, boiler, and more, are updated/published every three years or so. If the desire is to shorten the adoption interval, it should be shortened for all of the codes. Practically,

six months is unrealistic based on the law and administrative rule making process by which the codes are amended and adopted.

Further, requiring each county, at page 10, lines 3 to 5, to adopt the code within 6 months is not practical in light of the process for approving county ordinances by which the code would be put into effect in the counties. Given this, the requirement at page 10, lines 9 to 14, is irrelevant.

Page 11, line 19 to page 12, line 2, page 12 lines 8-13, and page 13, lines 11-16 require that performance targets for energy efficiency be 30% higher than the most recent International Energy Conservation Code. This is illogical. The most recent International Energy Conservation Code will become the standard for energy efficiency. It is a contradiction in terms to set it as the standard if designs against it can be 30% better.

Page 14, line 20 to page 15, line 22 are unnecessary and may interfere with the effective procurement of energy performance contracts called for by the guidelines established by the Comptroller, Chapters 103 and 103D of the Hawai'i Revised Statutes and Chapter 3-122 thru 132 of the Hawai'i Administrative Rules.

DAGS recommends that S.B. 871 be advanced.

Thank you for the opportunity to testify on this matter.

Testimony on

**S.B. NO. 1173 –
RELATING TO ENERGY EFFICIENCY**

Before the

Senate Committee on Energy and Environment
Thursday, February 5, 2009, 2:45 p.m., Conference Room 225

By

David Rezachek, Consultant
Honolulu Seawater Air Conditioning LLC

Good afternoon Chair Gabbard, Vice Chair English, and members of the Committee. My name is David Rezachek and I am testifying on behalf of Honolulu Seawater Air Conditioning, LLC (HSWAC).

HSWAC strongly supports the intent of S.B. 1173, which, among other things, directs the public utilities commission to establish energy efficiency portfolio standards.

In general, HSWAC supports most sections of this bill; however, **HSWAC cannot support Section 1 of this bill as it is currently written.**

HSWAC, and other testifiers, have previously supported the establishment of an energy efficiency portfolio standard for various energy efficiency technologies that are now incorrectly included in the State's renewable portfolio standard.

At the same time, HSWAC, and others, have provided considerable evidence as to why renewable energy electricity displacement technologies should continue to be included in the renewable energy portfolio standard.

Renewable energy electricity displacement technologies include solar water heating, seawater air conditioning district cooling systems, and solar air-conditioning.

While these technologies do not generate electricity, they do provide electricity savings through displacement of the electricity used to perform the same tasks. They definitely use renewable energy resources, but they are not energy efficiency technologies.

HSWAC maintains that displacement of electricity use by thermal applications of renewable energy technologies, is just as important and beneficial as electricity generation from renewable resources. And, as a result, renewable energy electricity displacement technologies should continue to be part of the renewable energy portfolio standard.

Including such electricity displacement technologies will help the utilities to more easily reach RPS mandates and will increase the number of candidate renewable energy technologies. This is particularly important for a high population, high electricity use location with limited land area, such as Oahu.

However, if this bill passes, and the PUC is directed to establish an energy efficiency portfolio standard, then HSWAC respectfully requests that:

(1) renewable energy electricity displacement technologies should continue to be part of the renewable energy portfolio standard, or

(2) no further efforts be made to remove renewable energy electricity displacement technologies from the renewable portfolio standard unless, and until, a separate energy efficiency portfolio standard has been developed which includes these technologies.

Furthermore, HSWAC would respectfully request that renewable energy electricity displacement technologies continue to be included in any definition of renewable energy for the purpose of being eligible to meet federal mandates and goals

for renewable energy use and to allow these technologies to be eligible for any incentives provided to other renewable energy technologies (e.g., preference for priority processing of permits, renewable energy facility siting and permitting assistance, etc.)

Thank you for this opportunity to testify.



February 5, 2009

Senator Mike Gabbard, Chair
 COMMITTEE ON ENERGY AND ENVIRONMENT
 Conference Room 225
 State Capitol
 415 South Beretania Street

Senator Gabbard:

Subject: Senate Bill No. 1173 Relating to Energy Efficiency

My name is Dean Uchida, Vice President of the Hawaii Developers' Council (HDC). We represent over 200 members and associates in development-related industries. The mission of Hawaii Developers' Council (HDC) is to educate developers and the public regarding land, construction and development issues through public forums, seminars and publications.

It is also the goal of HDC to promote high ethics and community responsibility in real estate development and related trades and professions.

The HDC has the following concerns regarding the subject bill.

The following is a list that attempts to summarize what is being proposed in the bill.

Senate Energy Efficiency Bills	SB 1173
Part I	Amends Chapter 269 HRS The public utilities commission shall establish energy efficiency portfolio standards that will offset the forecasted electrical load growth statewide between the years 2009 and 2030
Part II	<p style="text-align: center;">Amends Chapter 196 HRS:</p> <ol style="list-style-type: none"> 1. Recommends amendments to county building codes and the state building code that are consistent with the International Energy Conservation Code; 2. Requires that no later than January 1, 2010, the energy resources coordinator shall develop commissioning guidelines for construction of commercial buildings in the State; <p style="text-align: center;">Amends Chapter 107 HRS:</p> <ol style="list-style-type: none"> 1. To include the latest edition of the International Energy Conservation Code within six months of its adoption by the International Code Council; 2. Requires that each county shall use the International Energy Conservation Code, as updated, no later than six months after the adoption of the state building code; 3. If a county does not amend the statewide model code with regard to energy efficiency within six months, the sections of the state building code that include provisions of the International Energy Conservation Code shall become applicable as

	part of the county building code until the county adopts the amendments.
Part III	Amends Chapter 196 HRS: <ol style="list-style-type: none"> 1. Prior to 12/31/10 DAGS shall establish benchmarks for each existing state building; 2. Establish performance targets for energy efficiency in existing state buildings that are thirty per cent higher than the most recent guideline established by the International Energy Conservation Code for that type of building; 3. Develop guidelines for the retro-commissioning of state government buildings. After that date, all state government buildings shall be retro-commissioned no less than every five years.
Part IV	Amends Act 240 SLH 2007 to include photovoltaic energy systems in the pay as you save program with the utility companies. The program will be funded by a "Tariff" imposed by the electric utility.
Part V	Amends Chapter 269 HRS and requires the public benefits fee administrator to establish a program goal of replacing 50% of qualifying household appliances in the State within 5 years of the implementation of the program. <ol style="list-style-type: none"> 1. The public benefits fee administrator shall offer a cash financial incentive to qualifying residential retail electricity customers who replace a qualifying air conditioner; 2. The public benefits fee administrator may develop and implement a cash financial incentive program for the replacement of other qualifying household appliances; 3. The public benefits fee administrator may expend moneys collected through the public benefits fee for the purposes of this section, subject to the requirements of section 269-121.
Part VI	Amends Chapter 235 HRS by creating a Net zero energy building tax credit. The tax credit shall not exceed \$5,000 per residential building per builder or \$2,000 per unit in a multi-residential building.
Part VII	Amends Chapter 196 by directing the PUC to require energy efficiency information be provided on the property, by financial institutions and made available thru an on-line data base to realtors on the sale of property.
Part VIII	Amends Chapter 235 HRS to allow for joint taxpayers with adjusted gross incomes of less than \$40,000 to be eligible for a tax credit for rent paid.

As in most public policy issues, the process toward energy efficiency has many "unintended consequences." For example, last session the Legislature approved SB No. 644 which "mandated" the installation of a solar water heater in all new single family residences. The bill effectively:

1. Required all new single family residences constructed after January 1, 2010 to include a solar water heater system;
2. Eliminated the Solar thermal energy systems tax credits on all single-family residential properties after 1/1/2010; and
3. Prohibited a single family residential developer from claiming any renewable energy technologies tax credits for systems installed between now and 2010.

Government "Mandates" that attempts to direct the free market system generally result in penalizing one section of the market. For example, in this case, while the arguments that a \$7,000 thermal solar water heating system can easily be incorporated into the mortgage of the average priced home in Hawaii resulting in the homeowner realizing a net savings as energy cost rise over time, the mandate does not recognize or provide a mechanism to assist buyers seeking units priced for residents making less than 80% and less than 120% of the Housing and

Urban Development (HUD) median income levels in Hawaii. For Honolulu, the HUD median income for a family of four is \$77,300. Irrespective of costs, developers are required to provide generally 20% of their total units for families making 120% or less of the HUD median income and 10% of their total units for families making 80% or less of the HUD median income.

Adding the cost of a thermal solar water heating unit to these houses effectively means the buyer gets \$7,000 "less" house.

If the goal was really to significantly reduce our 90% dependency on imported oil, wouldn't it have made more of an impact on our energy dependency to require all existing housing units (approximately 491,000 as of July 2005) to convert to solar water heaters as opposed to requiring only new units to have solar (approximately 5,700 units in 2006). Why do you think the focus was on new units as opposed to existing?

No one disagrees with the intended goal of moving the state toward becoming more energy self sufficient. The concern is in the manner our elected leaders are choosing to accomplish this goal.

As was the case last session, the bill does not clearly identify the specific problem or problems that need to be addressed through the proposed legislation. If the underlying intent is to encourage more energy efficient perhaps the proposed legislation should be expanded to include an assessment and analysis of the various proposed legislation with clearly articulated criteria for outcomes that unintended consequences of the proposed legislation.

Part II of the bill "mandates" that all new construction comply with the International Energy Conservation Code and will require all counties to adopt the code for building purposes.

In other Cities or municipalities, government has led by example by "Mandating" that all government projects achieve a certain green or sustainable design standard. In so doing, the design professionals and contractors in these Cities were educated and developed the necessary hands on experience to build a green or sustainable project. AFTER the design professionals and contractors gained this experience, there were incentives created based on their hands on experience, to encourage the private projects to incorporate green or sustainable design. People were able to see that costs and benefits of changing behavior and moving toward more energy efficiency.

There also does not appear to be a comprehensive approach or "game plan" for how we should approach our dependency on imported oil. For example, Part VII deals with providing information on the structure regarding energy efficiency when the property is sold. And Part VIII deals with increasing the tax credit for low income renters. There is no explanation on how these two sections of the bill fit into the overall objective of being more energy efficient, if that is the intended goal. A comprehensive approach would require research and analysis of the programs and desired outcomes along with the economic analysis of all the costs associated with achieving these outcomes.

We strongly recommend that the Legislature develop a full understanding of the economic impacts created by this type of legislation. Perhaps the Legislature should conduct its own analysis or comparison to determine, at a minimum, the following:

1. What specific outcome or range of outcomes would each of the bills achieve;

2. Discuss the public benefits among the different outcomes and assess whether or not government involvement is necessary;
3. If government involvement is desired, assess the pros and cons of providing incentives or mandating compliance to achieve the desired outcomes.

While we see interest in the market moving toward more energy efficiency and sustainable designs, we believe there is much more that needs to be done before public policy makers “Mandate” any more “green or sustainable” legislation.

If the decision is to move the bill forward, we would strongly recommend that Part II of the bill be deleted or removed entirely.

Thank you for the opportunity to share our views with you.



February 5, 2009

COMMITTEE ON ENERGY AND ENVIRONMENT
 COMMITTEE ON COMMERCE AND CONSUMER PROTECTION
 Conference Room 225
 State Capitol
 415 South Beretania Street

Chairs Gabbard and Baker and Members of the Committees:

Subject: Senate Bill No. 1173 Relating to Energy Efficiency

My name is Jim Tollefson, President of the Chamber of Commerce of Hawaii. The Chamber of Commerce of Hawaii works on behalf of its members and the entire business community to:

- Improve the state's economic climate
- Help businesses thrive

The Chamber of Commerce of Hawaii has the following concerns regarding the subject bill.

The following is a list that attempts to summarize what is being proposed in the bill.

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Part VII	Amends Chapter 196 by directing the PUC to require energy efficiency information be provided on the property, by financial institutions and made available thru an on-line data base to realtors on the sale of property.
Part VIII	Amends Chapter 235 HRS to allow for joint taxpayers with adjusted gross incomes of less than \$40,000 to be eligible for a tax credit for rent paid.

As in most public policy issues, the process toward energy efficiency has many "unintended consequences." For example, last session the Legislature approved SB No. 644 which "mandated" the installation of a solar water heater in all new single family residences. The bill effectively:

1. Required all new single family residences constructed after January 1, 2010 to include a solar water heater system;
2. Eliminated the Solar thermal energy systems tax credits on all single-family residential properties after 1/1/2010; and
3. Prohibited a single family residential developer from claiming any renewable energy technologies tax credits for systems installed between now and 2010.

Government "Mandates" that attempts to direct the free market system generally result in penalizing one section of the market. For example, in this case, while the arguments that a \$7,000 thermal solar water heating system can easily be incorporated into the mortgage of the average priced home in Hawaii resulting in the homeowner realizing a net savings as energy cost rise over time, the mandate does not recognize or provide a mechanism to assist buyers seeking units priced for residents making less than 80% and less than 120% of the Housing and Urban Development (HUD) median income levels in Hawaii. For Honolulu, the HUD median income for a family of four is \$77,300. Irrespective of costs, developers are required to provide generally 20% of their total units for families making 120% or less of the HUD median income and 10% of their total units for families making 80% or less of the HUD median income.

Adding the cost of a thermal solar water heating unit to these houses effectively means the buyer gets \$7,000 "less" house.

If the goal was really to significantly reduce our 90% dependency on imported oil, wouldn't it have made more of an impact on our energy dependency to require all existing housing units (approximately 491,000 as of July 2005) to convert to solar water heaters as opposed to requiring only new units to have solar (approximately 5,700 units in 2006). Why do you think the focus was on new units as opposed to existing?

No one disagrees with the intended goal of moving the state toward becoming more energy self sufficient. The concern is in the manner our elected leaders are choosing to accomplish this goal.

As was the case last session, the bill does not clearly identify the specific problem or problems that need to be addressed through the proposed legislation. If the underlying intent is to encourage more energy efficient perhaps the proposed legislation should be expanded to include an assessment and analysis of the various proposed legislation with clearly articulated criteria for outcomes that unintended consequences of the proposed legislation.

Part II of the bill "mandates" that all new construction comply with the International Energy Conservation Code and will require all counties to adopt the code for building purposes.

In other Cities or municipalities, government has led by example by "Mandating" that all government projects achieve a certain green or sustainable design standard. In so doing, the design professionals and contractors in these Cities were educated and developed the necessary hands on experience to build a green or sustainable project. AFTER the design professionals and contractors gained this experience, there were incentives created based on their hands on experience, to encourage the private projects to incorporate green or sustainable design. People were able to see that costs and benefits of changing behavior and moving toward more energy efficiency.

There also does not appear to be a comprehensive approach or "game plan" for how we should approach our dependency on imported oil. For example, Part VII deals with providing information on the structure regarding energy efficiency when the property is sold. And Part VIII deals with increasing the tax credit for low income renters. There is no explanation on how these two sections of the bill fit into the overall objective of being more energy efficient, if that is the intended goal. A comprehensive approach would require research and analysis of the programs and desired outcomes along with the economic analysis of all the costs associated with achieving these outcomes.

We strongly recommend that the Legislature develop a full understanding of the economic impacts created by this type of legislation. Perhaps the Legislature should conduct its own analysis or comparison to determine, at a minimum, the following:

1. What specific outcome or range of outcomes would each of the bills achieve;
2. Discuss the public benefits among the different outcomes and assess whether or not government involvement is necessary;
3. If government involvement is desired, assess the pros and cons of providing incentives or mandating compliance to achieve the desired outcomes.

While we see interest in the market moving toward more energy efficiency and sustainable designs, we believe there is much more that needs to be done before public policy makers "Mandate" any more "green or sustainable" legislation.

If the decision is to move the bill forward, we would strongly recommend that Part II of the bill be deleted or removed entirely.

Thank you for the opportunity to share our views with you.

**Testimony Before the Senate Committees
On
Energy and Environment
And
Commerce and Consumer Protection**

February 5, 2009 (2:45 PM)

S.B. 1173 RELATING TO ENERGY EFFICIENCY

**By: Alan Hee
Energy Services Department
Hawaiian Electric Company, Inc.**

Chairs Gabbard and Baker, and Members of the Committees:

My name is Alan Hee, 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. 1173.

Energy Efficiency Portfolio Standard

HECO supports the development of an energy efficiency portfolio standard. It reflects the commitment of the state to energy efficiency and creates a yardstick against which we can measure our progress as a community towards energy independence.

HECO also supports giving the PUC the authority to establish the energy efficiency portfolio standard. It is the right agency to administer this standard because it has been involved in the utilities' integrated resource planning and demand-side management programs for over 13 years. The PUC is also familiar with how the design and implementation of energy efficiency programs must integrate with projections of electricity demand and the energy efficiency potential for Hawaii to set a reasonable level for the energy efficiency portfolio standard.

We therefore request an amendment to the bill. Rather than quantifying the energy efficiency portfolio standard by legislation, HECO suggests that the level of the standard be set by the PUC after it has had an opportunity to review recommendations from the public benefits fund administrator, who will be administering the energy efficiency programs later this year. Other industry participants, including the electric utilities, should also be asked to provide input to quantifying this standard.

For example, the bill requires a reduction of 4,300 GW. We believe this was meant to be 4,300 GWH. Still, it is not clear whether the 4,300 GWH is cumulative or incremental. If incremental, a report presented by HECO and discussed by HECO's Integrated Resource Planning Advisory Group in early 2008, found that the absolute maximum energy efficiency potential on Oahu was substantially less than half of the 4,300 GWH goal in this bill. Thus, HECO questions the basis and the methodology used to determine the 4,300 GWH figure.

Energy Efficiency Assessment

HECO supports the requirement that the public benefits fund administrator conduct an energy efficiency assessment of energy use patterns and funding that effort from public funds. This assessment can form the basis for the energy efficiency portfolio standard that is discussed above.

However, HECO is concerned with the definition of energy efficiency "cost-effectiveness" included in this bill (page 3, lines 6-11), which is different from the definition used by the utilities and the PUC since 1996. The language for "cost effectiveness" used in this bill considers only the perspective of the person or business installing the measure. However, ratepayers are funding the energy efficiency programs, and their costs and benefits should also be considered.

For example, it is conceivable that an energy efficiency measure meets the proposed cost-effectiveness requirement only because other ratepayers are paying nearly the full incremental cost of the measure through rebates. This would not be fair to the ratepayers who do not benefit from the energy savings in their bills. HECO therefore requests that the definition of "cost effectiveness" proposed in this measure not be adopted and that the current definition of "cost effectiveness" be retained.

On-bill Financing of Energy Efficiency

HECO supports the intent of this bill to provide financing options for the purchase of eligible renewable energy technology systems and energy efficient measures. The bill proposes that these programs be administered by the Public Benefits Fund ("PBF") Administrator.

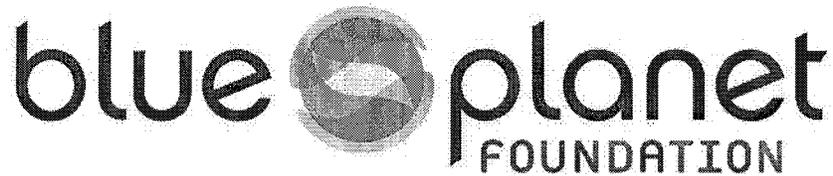
Currently, the utilities are responsible for administering a Pay as you save pilot program for residential solar water heaters. However, it should be noted that this type of financing program is costly for the utility as it is not set up as a loan servicing organization. The PBF Administrator may be in a better position to administer and track these types of transactions. HECO would continue to provide billing and payment support.

Furthermore, the Public Utilities Commission ("Commission") will be awarding the PBF Administrator contract shortly. The PBF Administrator will be required to develop and propose a PV rebate program to the Commission in 2009. The PBF Administrator will also be required to review and develop new programs, which could include appliance recycling incentives programs.

HECO recommends the committee allow the Commission to work with the PBF Administrator to develop these types of programs which may include financing options.

In summary, HECO supports SB 1173, but has several recommendations that would enhance the proposed language.

Thank you for this opportunity to testify on this measure.



**SENATE COMMITTEE ON ENERGY AND ENVIRONMENT
SENATE COMMITTEE ON COMMERCE AND CONSUMER PROTECTION**

February 5th, 2008, 2:45 P.M.
Room 225

(Testimony is 6 pages long)

TESTIMONY IN STRONG SUPPORT OF SB 1173, SUGGESTED AMENDMENTS

Chairs Gabbard and Baker and members of the committees:

The Blue Planet Foundation strongly supports SB 1173, comprehensively addressing energy efficiency policy needs to drive Hawaii's clean energy future. We believe enactment of this measure—in whole form—is one of the most critical steps the legislature can take this session to increase Hawaii's energy security, reduce residents' energy costs, create jobs, and keep money circulating within Hawaii's economy.

Hawai'i is the most dependent state in the nation on imported oil. Some 50 million barrels are imported annually, nearly 80% of which originate from foreign sources¹. In addition, over 805,000 tons of coal are imported into our state². These sources provide power for over 92% of Hawaii's electricity generation. The combustion of these resources also contributes over 23 million tons of climate changing greenhouse gas into our atmosphere annually³. Hawaii's economic, environmental, and energy security demand that we reduce the amount of fossil fuel imported and consumed in Hawai'i. To that end, new policies are critically needed that will dramatically increase energy efficiency, build our smart energy infrastructure with storage, and develop clean, renewable, and indigenous energy sources

Energy efficiency, unfortunately, is the "dark horse" of clean energy resources. Energy efficiency—efficient lights, appliances, electronics, behavior changes, and the like—is the largest, cheapest, safest, and fastest energy option that Hawai'i can implement. Consider:

- Energy efficiency is the fastest-growing U.S. "energy source" (growth of ~2.5 to 3.5% annually)
- National energy efficiency programs save energy at an average cost of about 3 cents/kWh -- *about 1/10 the average electricity cost in Hawaii*

¹ The State of Hawaii Data Book, 2007

² *Ibid.*

³ ICF International. Inventory of Greenhouse Gas Emissions and Sinks in Hawaii: 1990 and 2007. December 2008.

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- Leading states are saving over 1% additional of total electricity sales annually
- Energy efficiency provides major local economic benefits: energy efficiency is 100% obtained from investment in local homes and businesses
- It is also the least visible, least understood, and most neglected

Our testimony will address each part of the bill separately.

Part 1. Energy Planning.

Part 1 of SB 1173 establishes energy efficiency portfolio standards. Directing the PUC to establish an energy efficiency portfolio standard would help Hawaii take advantage of this critical energy resource. While Blue Planet supports this part of SB 1173, we would prefer that the measure go further to create the framework for dramatic increases in energy efficiency in Hawai'i. We offer the following suggested amendments:

1. Hawai'i law should declare that energy efficiency shall be the first priority resource for new electric system resources in Hawai'i. This could be done by adding to HRS the following: ***“Given that energy efficiency is the most cost effective electricity resource, it is the policy of the state of Hawai'i to implement energy efficiency measures before other electricity supply resources.”***

Alternatively, the policy could read: ***“It is the policy of the state of Hawaii to implement commercially available and cost effective energy efficiency measures to the maximum extent feasible.”***

2. While we appreciate the clear direction to the PUC to achieve a certain amount of savings⁴ by a certain year, annual percentages may make more sense and be easier to measure and keep on track. For example, the “energy efficiency resource standard” could require annual energy efficiency program electricity savings equivalent to 3% of 2008 retail sales by the end of 2011; 10% by the end of 2015; and an additional 2% per year each year thereafter.
3. To increase compliance with the energy efficiency portfolio standard, a system of incentives and penalties to the third party administrator and the utility for achievement should be established in addition to the standards.

Finally, an energy efficiency portfolio standard should complement a true renewable portfolio standard, should one be established through other measures currently pending before this

⁴ On page 1, line 11-12, of the bill, the “four thousand three hundred gigawatts of electricity savings statewide by 2030” should read “four thousand three hundred gigawatt-hours of electricity savings statewide by 2030.”

committee. We hope that the legislature forwards this proposal, IN CONJUNCTION with measures to establish a true renewable portfolio standard.

Part 2. Energy Efficient Buildings

Part 2 of SB 1173 accelerates the creation of energy efficient construction in Hawai'i. Blue Planet strongly support efforts to radically increase the efficiency of new and existing buildings in Hawai'i, as buildings are the largest consumer of electricity and the building stock turns over very slowly. **To this end, Blue Planet supports the adoption of more aggressive building code standards by the counties—30% higher than the most recent guideline established by International Energy Conservation Code (IECC).** Such a stringent building code would yield the construction of high performance buildings in Hawai'i—performance that would result in much lower energy bills over the life of the home or building.

Efficiency investments pay back to Hawaii's residents and economy in numerous ways.

1. First, the investment in efficiency pays back in savings during the home or building's occupancy and use.
2. Second, building more high performance buildings is typically more labor and material intensive than structures that are inefficient, resulting in more job creation—the tradeoff being money is directed toward local jobs and contractors instead of going overseas to purchase fossil fuel.
3. Finally, building high performance buildings is the only way for Hawai'i to achieve its clean energy future. We simply cannot meet our growing energy demands in the short term without radically improving the efficiency of our buildings.

We support Part 2 of SB 1173 with a requirement that counties adopt building codes that achieve 30% greater efficiency than the most recent IECC.

Part 3. State Building Efficiency

Part 3 of SB 1173 requires state-owned buildings to be retrofitted with efficiency improvements. It is critical that the state operate high performance buildings. Not only should the state be leading by example in energy efficiency, but taxpayers are paying the energy costs for state buildings. Blue Planet particularly appreciates the direction that state buildings must be retrofitted to achieve 30% higher than the most recent guideline established by the IECC, and the requirement that performance-based contracting be employed to meet the targets. This makes energy efficiency improvements more affordable, as the investment is paid off over time through energy cost savings.

Part 4. On-bill Financing for Energy Efficiency.

Part 4 of SB 1173 expands on-bill financing options to make energy efficiency investments more affordable to Hawai'i residents. On-bill financing is one of the most powerful tools to increase adoption of energy efficiency and clean energy investments. Blue Planet believes that pay as you save, or "on-bill financing," should be made a regular program administered by the public utilities commission (PUC) or the utilities.

On-bill financing is a critical tool to overcome the biggest barrier to energy efficiency and clean energy investment: the up-front cost. 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 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.⁵

A 1983 study on refrigerators⁶ 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.

⁵ Sanstad, A. H., Blumstein, C., & Stoft, S. (1995). Viewpoint: How high are option values in energy-efficiency investments? *Energy Policy*, 23, 739-743.

⁶ Meier, A., and Whittier, J. (1983). Consumer Discount Rates Implied by Purchases of Energy-Efficient Refrigerators. *International Journal of Energy*, 8(12), 957-962.

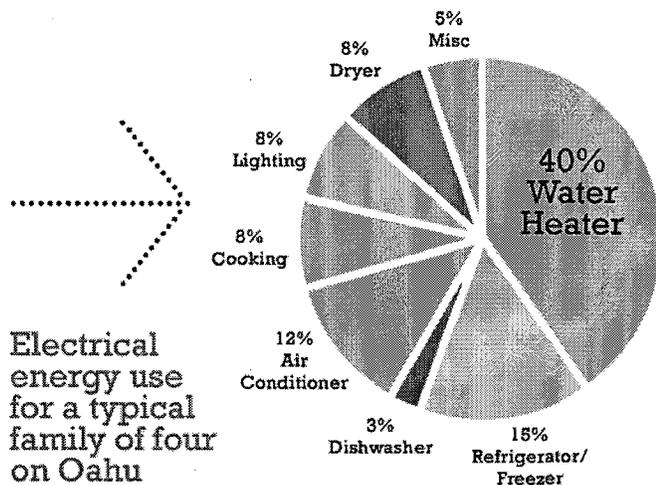
Average Implicit Discount Rates in Energy Efficient Investments (Sanstad, et al., 1995)

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

Part 5. Household Appliances.

Part 5 of SB 1173 provides an incentive for individuals to trade-in their old, energy inefficient appliance for an ENERGY STAR, energy efficient appliance. After household water heaters, appliances—such as refrigerators and freezers, air conditioners, and dryers—make up the largest portion of household energy demand (see figure on right). Providing a financial incentive to homeowners to purchase more energy efficient appliances (ENERGY STAR appliances are typically 25% better than average) would foster the adoption of more energy efficiency while saving local folks money.



Part 6. Net-Zero Energy Buildings

Part 6 of SB 1173 establishes a tax credit for developers to build net-zero energy buildings. Blue Planet supports this incentive to encourage the development of high performance, zero energy buildings of the future in Hawai'i.

Part 7. Consumer Information.

Part 7 of SB 1173 directs the public utilities commission (PUC) to establish a consumer information program on energy efficient properties. Home buyers or renters deserve to know what they will likely be paying per month for energy.

Hawaii residents pay the highest electricity rates in the nation. Many homeowners have vastly inefficient homes and operate inefficient appliances simply because they are not aware of the energy they are wasting or they don't want to make the investment to improve the situation. Unfortunately, energy efficiency investments are sometimes penalized in the marketplace as homes or apartments that have invested in energy efficient appliances or solar water heaters cost more up front (or have a higher rent)—despite being less expensive to live in on a monthly basis. This measure would change that by creating a program whereby potential homebuyers or tenants could see what the monthly energy cost of the home would be. This information disclosure would enable an honest assessment of the true costs of home ownership or renting and encourage energy efficiency investments by homeowners.

For example, consider an average family home on O'ahu. A typical home may have a monthly energy bill of around \$300. A high performance, energy efficient home may be closer to \$100. Over a 30-year mortgage (not including a price increase in electricity), the energy cost difference between the two homes is \$72,000. That is a cost—or savings, depending—that may be neglected in the purchasing decision today.

Blue Planet supports amending part 7 of SB 1173 to go further in fostering high performance and energy efficient homes in Hawai'i by requiring that homes achieve a certain efficiency standard at the time of sale. Such a "Time of Sale Efficiency Standard" would ensure that homes in Hawai'i meet a minimum level of efficiency, saving homeowners money in energy bills over the long term. The standard should be tied to the energy code established for new buildings, such as the latest IECC.

Part 8. Low Income Household Renter Tax Credit

Part 8 of SB 1173 allows low income renters the ability to transfer their tax credit to their landlord with his or her approval. While we take no position on this part of SB 1173, we believe that the solar tax credit should be made to be refundable for low income households.

Thank you for the opportunity to testify.



Sierra Club Hawai'i Chapter

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SENATE COMMITTEE ON ENERGY & ENVIRONMENT SENATE COMMITTEE ON COMMERCE AND CONSUMER PROTECTION

February 5, 2009, 2:45 P.M.

(Testimony is 1 page long)

TESTIMONY IN SUPPORT OF SB 1173

Chair Gabbard, Chair Baker, and members of the Committees:

The Sierra Club, Hawai'i Chapter, with 5500 dues paying members statewide, strongly supports SB 1173, comprehensively addressing energy efficiency policy to drive Hawai'i's future.

Energy efficiency is the proverbial "low hanging-fruit" in the range of options necessary to reduce our energy costs and greenhouse gas emissions. There are a host of public policy considerations supporting this measure, including:

- **Energy Efficiency Is a Power Source.** Energy efficiency is a source of energy like coal, gas, or nuclear, except instead of drilling for it or blowing up mountaintops to get to it, we can tap into this clean energy source by using ingenuity to do more with the energy we generate: *we work smarter, not harder.*
- **Energy Efficiency Creates Jobs.** A recent 2009 report found that California's economy grew as a result of aggressive energy efficiency projects.¹ Cutting energy bills let California consumers and companies spend their cash on other things, and helped create 1.5 million jobs. Now imagine if Hawai'i had followed California's example? It's not too late to embark on job creation.
- **Energy Efficiency Reduces Our Carbon Footprint.** Buildings contribute to nearly half (43%) of all U.S. carbon emissions.² Improving their energy

¹ See 2009 California Green Innovation Index, available at www.next10.org

² The recent Hawai'i report entitled Greenhouse Gas Inventory Revised, 1990 & 2007, does not appear to have broken these figures out by this category.

efficiency lowers energy bills, eliminates the need for new power plants, increases our energy independence, reduces air and water pollution and cuts the carbon emissions that cause global warming.

- **Even Small Efficiency Improvements Add Up.** If every household in the United States switched to Energy Star light fixtures, we could prevent 50 million tons of global warming pollution per year, the equivalent of taking 10 million cars off the road. In every home, office, and factory we can use energy more efficiently by putting to work currently available products like advanced lighting, better windows, more efficient heating and cooling systems, and new appliances that use far less energy than their older counterparts.

This Is Not a Dream. Other states have already followed this model and have observed tangible results. For example, California's aggressive efforts to improve the efficiency of things like air conditioners and refrigerators have helped hold its electric demand steady per capita for *three decades*. By contrast, electricity consumption has grown by 50 percent for the U.S. as a whole in that same time period.

While the Sierra Club supports SB 1173, we believe it could go further. We suggest that it be amended to express that "It is the policy of the state of Hawaii to implement commercially available and cost effective energy efficiency measures to the maximum extent feasible." This would bring our overall energy policy in comport with the belief that energy efficiency should be the first power source considered, i.e., we should work smarter, not work harder.

Finally, we suggest that in order to bring compliance with the energy efficiency portfolio standard, a system of incentives and penalties to the third party administrator and the utility for achievement should be established in addition to the standards.

Thank you for the opportunity to testify.



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February 4, 2009

The Honorable Mike Gabbard, Chair
Senate Committee on Energy & Environmental Protection
The Honorable Rosalyn H. Baker, Chair
Senate Committee on Commerce and Consumer Affairs
State Capitol, Room 225
Honolulu, Hawaii 96813

RE: S.B. 1173 Relating to Energy Efficiency

HEARING DATE: Thursday, February 5, 2009 at 2:45 p.m.

Aloha Chair Gabbard, Chair Baker and Members of the Joint Committees.

I am Mihoko Ito, here to testify on behalf of the Hawai'i Association of REALTORS® ("HAR") and its 9,600 members in Hawai'i. HAR **expresses concerns** regarding S.B. 1173, and in particular **Section 16**, which directs the Public Utilities Commission ("PUC") to establish a consumer information program on energy efficient properties.

HAR believes the first step is for the PUC to study and report on the implementation of a consumer information program. H.B. 436 provides broad authority to the PUC to implement rules associated with the disclosure of certain information to both homeowners and lenders. These rules may create unintended but serious consequences for the real estate and mortgage industries, including the possibility of delays, point-of-sale mandates substantial costs, and other requirements.

However, if the Committees are inclined to pass the bill, HAR makes the following suggestions to amend Section 16:

1. Amend page 1, lines 8-11 to: "Make accessible to consumers, real estate licensees and lenders energy efficiency information on properties." This will clarify that this responsibility applies to the PUC.
2. Page 1, lines 12-13: Add "real estate licensees".
3. Page 1, line 18: Remove "to realtors". The term REALTOR® is a registered membership mark. HAR also believes this database should not be limited to just real estate licensees but should be available to other interested parties.
4. Remove Page 2, lines 1-4. This subsection is unclear. If it is the previous homeowner's duty to pass the report on to the consumer, it may require knowledge of energy efficiency that is not possessed by either the consumer or the real estate licensee.

Mahalo for the opportunity to testify.

TAXBILLSERVICE

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TAX FOUNDATION OF HAWAII

Honolulu, Hawaii 96813 Tel. 536-4587

SUBJECT: INCOME, Net zero energy building tax credit; renter tax credit

BILL NUMBER: SB 1173

INTRODUCED BY: Gabbard, Chun Oakland, English, Espero, Green and 8 Democrats

BRIEF SUMMARY: Adds a new section to HRS chapter 235 to allow a taxpayer to claim a net zero energy building tax credit that shall be deductible from the taxpayer’s income tax liability for the taxable year in which the credit is properly claimed. In order to qualify for the credit, the taxpayer builder shall be in compliance with all applicable federal, state, and county statutes, rules, and regulations.

The tax credit for residential buildings shall be equal to:

Area of building (square feet)	Tax credit per square foot
1,000 or less	\$9
1,001 to 2,500	8
2,501 to 3,999	7
4,000 or larger	6

The tax credit shall not exceed \$5,000 per residential building per builder or \$2,000 per unit in a multi-residential building; provided that each unit is separately metered for energy purposes.

The tax credit for a commercial building shall be \$3 per square foot, not to exceed \$50,000.

Defines “net zero energy building” means a building that produces enough energy, including electricity and gas, that is equal to or greater than the energy consumed by the occupants. Defines “builder” as a single or multi-family dwelling owner or commercial building owner or a new or existing building that is built or renovated to provide net zero energy use.

Credits in excess of a taxpayer’s income tax liability shall be applied to subsequent tax liability. Claims for the credit, including any amended claims, must be filed on or before the end of the 12th month following the close of the taxable year. Allows the director of taxation to adopt necessary rules and forms pursuant to HRS chapter 91 to carry out this section.

The state energy resources coordinator shall submit a review of the net zero tax credit to the 2015 legislature and recommend whether to change the magnitude and specifications of the tax credit.

Appropriates \$_____ in general funds for fiscal 2010 and fiscal 2011 to be expended by the department of business, economic development and tourism for the purposes of this act. This section shall be applicable to tax years beginning after December 31, 2009 and ending before January 1, 2016, and shall be repealed on January 1, 2016.

SB 1173 - Continued

Amends HRS section 235-55.7 (c) to provide that taxpayers with adjusted gross incomes (AGI) of less than \$20,000 or joint taxpayers with AGI of less than \$40,000, who secure the approval of their landlord, may transfer their tax credit to their landlords provided the transfer shall not affect the ability of the landlord to claim any other tax credit as a corporate taxpayer. Allows the department of taxation to adopt rules pursuant to HRS chapter 91 to effectuate this section. This section shall be applicable to tax years beginning after December 31, 2008.

Makes other nontax amendments and appropriations relating to energy efficiency in the state.

EFFECTIVE DATE: July 1, 2009

STAFF COMMENTS: The proposed measure would allow a taxpayer builder to claim a net zero energy building tax credit of up to \$5,000 for a residential building (\$2,000 per unit in a multi-residential building) or up to \$50,000 in the case of a commercial building. In order to claim the tax credit, the building must produce an amount of energy that is equal to or greater than the amount of energy consumed by the occupants of the building.

This measure proposes an incentive in the form of an income tax credit to encourage taxpayer builders to make residential and commercial buildings energy self-sufficient and efficient to the point that the buildings can generate their own energy. It would grant tax credits without a taxpayer's need for tax relief. Further, if this measure is enacted, it would appear that a taxpayer who installs any renewable energy device that qualifies for the state energy credits under HRS 235-12.5 would also be able to claim the proposed net zero energy building tax credit.

Lawmakers need to remember two things. First, the tax system is the device that raises the money that they, lawmakers, like to spend. Using the tax system to shape social policy merely throws the revenue raising system out of whack, making the system less than reliable as there is no way to determine how many taxpayers will avail themselves of the credit and in what amount. The second point to remember about tax credits is that they are nothing more than the expenditure of public dollars albeit out the back door. If, in fact, these dollars were subject to the appropriations process, would taxpayers be as kind about the expenditure of these funds when schools go wanting for books and repairs, or for the lack of space prisoners are sent off to the mainland for incarceration or there isn't enough money for substance abuse treatment?

The energy cost savings on an energy efficient building should be enough of an incentive without the need for a monetary handout by the state. Given the current state budget situation, it is questionable whether the state can afford to payout the credit proposed in this measure.

Finally, it should be noted that because these systems are currently very expensive to purchase and install, only those taxpayers who have the means to make the conversion or installation will be able to claim the credit. Thus, those families at the lower end of the income scale will not benefit from either the credit or the cost savings to be realized from the device. Since the state still needs resources to provide services and programs, the burden of paying for those programs and services will be shifted to those taxpayers who cannot afford to acquire these devices.

The proposed measure also allows a taxpayer receiving a low-income household renter tax credit to transfer their tax credit to their landlord. It should be remembered that the low-income household renter

SB 1173 - Continued

tax credit was enacted as a system of tax credits for household renters which was intended to partially offset the higher tax burden on renters resulting from the lack of tax relief similar to the home exemption for homeowners and the 4% general excise tax levied on rental income. While the low-income renter tax credit is aimed to provide relief to the renter, it is questionable why this measure proposes to transfer the renter tax credit to the landlord.

Digested 2/5/09

HAWAII RENEWABLE ENERGY ALLIANCE

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Cully Judd
Inter Island Solar Supply

John Crouch
Sunpower

Herbert M. (Monty) Richards
Kahua Ranch Ltd.

**TESTIMONY OF WARREN BOLLMEIER ON BEHALF OF THE HAWAII
RENEWABLE ENERGY ALLIANCE BEFORE THE SENATE COMMITTEES
ON ENERGY AND ENVIRONMENT PROTECTION, AND
COMMERCE AND CONSUMER PROTECTION**

SB 1173, RELATING TO ENERGY EFFICIENCY

February 5, 2009

Chairs Gabbard and Baker, Vice-Chairs English and Ige and members of the Committees, I am Warren Bollmeier, testifying on behalf of the Hawaii Renewable Energy Alliance (HREA). HREA is a nonprofit corporation in Hawaii, established in 1995 by a group of individuals and organizations concerned about the energy future of Hawaii. HREA's 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 HREA's 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 purposes of SB 1173 are to: (i) Part I - direct the public utilities commission to establish energy efficiency portfolio standards ("EEPS"), and (ii) directs, provides or requires related energy efficiency measures in subsequent Parts. HREA supports the intent of this bill, but **opposes** the bill as written for the following reasons relating to Parts 1, IV and VI:

Part I - Energy Efficiency Portfolio Standards (or an Alternative?)

1. Reason for a EEPS? HREA agrees there is a need for a portfolio standard (separate from RPS, and a companion to RPS) that includes energy efficiency technologies and measures. However, we believe the implied definition in this bill that energy efficiency includes renewable substitution (or "off-set") technologies is wrong and therefore not appropriate;
2. Better Yet a DPS. HREA suggests a Demand-side (or "Demand-reduction portfolio standard ("DPS") as a more appropriate companion to RPS. DPS would include those measures a customer could employ to "off-set a portion up to all" of his electrical load. These include the following technologies and measures:
 - a. traditional energy efficiency,
 - b. off-set renewables, and
 - c. net metered renewables; and
3. How to Implement the DPS. HREA recommends that the DPS be the responsibility of the Public Benefits Fund Administrator as directed by the public utilities commission. See the attachment for a number of proposed amendments to the bill.

Part IV – On-Bill Financing for Energy Efficiency

The purpose of this section is to expand the pay as you save pilot program to include photovoltaic energy systems and refrigerator exchanges. We have the following comments:

1. Reason for PAYS®. As noted in the bill, a PAYS® pilot program has been initiated in Hawaii for solar water heating systems per HECO's Solar Saver Program. The existing law, however, does not require the utilities to design the PAYS® programs to the trademarked name (as indicated herein), and HREA believes the Solar Saver Program, while modestly successful to date in its pilot phase, could be greatly improved;
2. How to improve PAYS®. HREA believes the existing program can be greatly improved by designing and implementing to the detailed PAYS® criteria. We believe this bill is an attempt to do that, and we have a number of suggestions for amendments that would align the law closer to the PAYS® criteria. The suggestions are in the attachment and are summarized as follows:
 - a. HREA believes the intent is to implement PAYS®, and if so, use of the trademark is required or else the law would be in violation of the trademark law. Note: a license for use of the trademark is "cost free" and would willingly be provided by the creators of PAYS®, Harlan Lachman and Paul Cillo of the Energy Institute of Colchester, Vermont; and, in short,
 - b. HREA believes the proposed amendments provide sufficient guidance to the public utilities commission and the Public Benefits Fund Administrator

Part VI – Zero Net Energy Buildings

The purpose of this section is to provide a net zero energy building tax credit to builders of residential or commercial buildings that produce enough energy that is equal to or greater than the energy consumed by the occupants of the building.

HREA believes the definition of "zero net energy building" needs to be revised to take into account the DPS. Our recommendation is provided in the attachment.

Thank you for this opportunity to testify.

A BILL FOR AN ACT

RELATING TO ~~ENERGY EFFICIENCY~~ DEMAND REDUCTION.

BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF HAWAII:

PART I.

~~ENERGY EFFICIENCY~~ DEMAND REDUCTION PLANNING

SECTION 1. Chapter 269, Hawaii Revised Statutes, is amended by adding a new section to be appropriately designated and to read as follows:

"§269-A. ~~Energy efficiency~~ Demand reduction portfolio standards. (a) The public utilities commission shall establish ~~energy efficiency~~ demand reduction portfolio standards that will mandate utility customer energy savings offset the forecasted electrical load growth statewide between the years 2009 and 2030.

(b) The ~~energy efficiency~~ demand reduction portfolio standards which are to be a companion to the Renewable Portfolio Standards (HRS 269, Part V) shall be designed to achieve 30% of the statewide electricity requirements in 2030 including electricity savings by 2030, ~~four thousand three hundred gigawatts of electricity savings statewide by 2030~~, provided that the public utilities commission shall establish interim goals for energy use reductions.

(c) The public utilities commission shall:

(1) Identify parties and stakeholders who are responsible for each element of the ~~energy efficiency~~ demand reduction portfolio standards;

(2) Monitor progress towards achieving the demand reduction portfolio standards; and

(3) Establish incentives and penalties based on performance.

(d) In establishing the ~~energy efficiency~~ demand reduction portfolio standards, the public utilities commission shall consider the impact of: (i) ~~energy efficiency~~ measures, (ii) ~~renewable energy~~ displacement (or off-set) technologies ~~substitutions~~, including solar water heating, solar air conditioning and seawater air-conditioning, on meeting ~~energy efficiency~~ demand reduction standards.

(e) The public benefits fee administrator shall develop energy efficiency demand reduction programs designed to facilitate the achievement of energy efficiency demand reduction portfolio standards. Beginning March 1, 2010, the public benefits fee administrator shall submit annual progress reports to the public utilities commission on the energy savings achieved during the previous year."

SECTION 2. (a) No later than December 31, 2010, the public benefits fee administrator shall conduct an energy efficiency demand reduction assessment of energy use patterns in the State. This assessment shall include:

- (1) Research of end-use with respect to homes, businesses, and other electric utility customers;
- (2) Identification of potential energy savings; and
- (3) Recommendations of energy efficiency demand reduction programs.

(b) Based upon its review, the public benefits fee administrator shall develop aggressive energy efficiency demand reduction plans; provided that efficiency shall be the first loaded resource in all cases where it is cost effective. Cost effectiveness shall be determined as a measure of all resources that cover the incremental cost of investment within fifteen years as measured against average electricity rates for residential, small commercial, large commercial, industrial, and agricultural customers.

To the extent that county building codes or the state building code may change between versions of efficiency plans, the net impact of the building code requirements should be netted out of the plans.

(c) Prior to the availability of an efficiency plan as required by subsection (b), the public benefits fee administrator, public utilities commission, and department of business, economic development, and tourism shall collaborate with stakeholders to identify a limited set of cost-effective energy efficiency demand reduction measures that may be implemented immediately, in significant volumes and with high penetration goals, that will result in high energy savings.

SECTION 3. The public benefits fee administrator shall submit a report of its findings of the energy efficiency demand reduction assessment to the public utilities commission, the energy resources coordinator, electric utilities, and the legislature no later than December 31, 2010.

SECTION 4. There is appropriated out of the public utilities commission special fund the sum of \$500,000 or so much thereof as may be necessary for fiscal year 2009-2010 for the public benefits fee administrator to conduct an energy efficiency demand reduction assessment pursuant to this Act.

The sum appropriated shall be expended by the public utilities commission for the purposes of this Act.

PART IV.

ON-BILL FINANCING FOR ENERGY EFFICIENCY DEMAND REDUCTION

SECTION 11. Act 240, Session Laws of Hawaii 2006, is amended by amending section 13 to read as follows:

"SECTION 13. ~~[Solar water heating pay]~~ Pay as you save Pay As You Save® program; purpose; establishment; tariff filing. (a) Solar water heating systems and photovoltaic energy systems are a renewable energy technology that uses solar collectors placed on roofs to heat water[-] or provide electricity. These systems decrease reliance on imported oil used to generate electricity to heat water or provide electricity because they use less energy than the electric ~~[hot water heating]~~ systems replaced. In addition, the replacement of older, less efficient household appliances with energy efficient appliances will also decrease energy usage.

The legislature finds that the up-front cost of installation is a barrier preventing many Hawaii residents from installing solar water heating systems[-] or photovoltaic energy systems. The legislature further finds that the cost of replacing inefficient household appliances also presents a significant barrier to installing more efficient appliances. The legislature further finds that the renewable energy technologies income tax credit and electric utility rebates have not been enough of an incentive to overcome these up-front costs, especially for rental housing and homes in need of retrofit for these important energy-saving devices.

The purpose of this section is to authorize the public utilities commission to implement a pilot project to be called the ~~["solar water heating pay"]~~ "pay as you save Pay As You Save® program".

(b) The public utilities commission shall implement a pilot project to be called the ~~["solar water heating pay"]~~ "pay as you save Pay As You Save® program", which shall:

(1) Allow ~~[a]~~ residential and small commercial electric utility ~~[customer]~~ customers to purchase a solar water heating system[-] or a photovoltaic energy system:

- (A) With no upfront payments; and
- (B) By paying the cost of the system over time on the customer's electricity bill[-] at an interest rate to be determined by the public utilities commission;

provided that the estimated life cycle electricity savings from the solar water heating system or photovoltaic energy system exceeds the cost of the system;

(2) Provide for billing and payment of the solar water heating system or photovoltaic energy system on the utility bill;

(3) Provide for disconnection of utility service for non-payment of ~~[solar water heating system]~~ pay as you save Pay As You Save® payments; ~~[and]~~

(4) Allow for assignment of system repayment costs attached to the meter location[-];

(5) Allow customers to exchange a qualifying refrigerator, manufactured prior to a date determined by the public utilities commission, for a new ENERGY STAR refrigerator, subject to qualifications established by the public utilities commission, provided that customers shall make no up front payment but shall be allowed to pay any costs associated with the exchange over time on the customer's electricity bill; and

(6) Allow customers who enroll in the program to receive an energy audit with the cost partially paid by the public benefits fee administrator, contracted pursuant to section 269-122, Hawaii Revised Statutes, at a rate to be determined by the public utilities commission.

(c) The public utilities commission shall work with the Public Benefits Administrator to determine if third party financing and third party ownership of systems during the duration of participants' payments could facilitate available federal and state tax credits and accelerated depreciation lowering the installation cost for all measures for all participants including renters and those who otherwise would not be able to realize the full value of tax credits

(d) The public utilities commission shall work with the Public Benefits Administrator to design the pilot program, including marketing, participating contractor requirements, direct contacts with owners of rental properties, and budget allocations to ensure that at least one-third of all participants live in rental housing.

~~(e)~~(e) The public utilities commission shall determine the time frame of the pilot program and shall gather and analyze information to evaluate the pilot program[-] and shall report this information to the energy resources coordinator.

~~(d)~~(f) The public benefits fee administrator shall approve and administer the pilot program and shall provide progress reports to the public utilities commission eight months and fourteen months after the start of the program and annually thereafter.

~~(e)~~(g) The public benefits fee administrator may contract with appropriately licensed or qualified persons to install solar water heating systems or photovoltaic energy systems in the pilot program and shall provide for the decommissioning and disposal of refrigerators that are recovered from customers pursuant to subsection (b)(5) in a manner that complies with all applicable requirements for waste disposal.

~~(f)~~(h) The public utilities commission may conduct follow up evaluations of the program, including energy audits, efficiency measurements, and verification in accordance with evaluation criteria and protocols established during development of the pilot design..

~~((d))~~(a) (i) No later than June 30, [2007,] ____, each electric utility shall implement by tariff a pay-as-you-save Pay As You Save@ model system program for [residential] consumers that is consistent with this

section. Each utility shall provide at least six months prior notice of its proposed tariff to the public utilities commission as prescribed in section 269-12(b), Hawaii Revised Statutes. Within the prescribed notice period, the public utilities commission shall review the proposed tariff and after a hearing may require modifications to the proposed tariff as necessary to comply with or effectuate the purposes of this section.

~~[(e)] (h)(i)~~ The commission shall ensure that all reasonable costs incurred by electric utilities to start up and implement the pay as you save Pay As You Save® model system are recovered as part of the utility's revenue requirement, including necessary billing system adjustments and any costs for pay as you save Pay As You Save® model system efficiency measures that are not recovered via participating [residential] consumers' pay as you save Pay As You Save® model system bill payments or otherwise.

~~(k) During design and approval of the pilot design, the Commission will investigate the utilities' costs for billing and information system changes that would automate and simplify all PAYS® related transactions and responsibilities, including conversations between participants or successor customers and customer service personnel and report back to the legislature~~

~~(h)(i) No later than December 31, 2009, the public utilities commission shall adopt rules, pursuant to chapter 91, for the purposes of the pay as you save Pay As You Save® program."~~

PART VI.

NET-ZERO ENERGY BUILDINGS

SECTION 13. Chapter 235, Hawaii Revised Statutes, is amended by adding a new section to be appropriately designated and to read as follows:

"§235- Net zero energy building tax credit. (a) There shall be allowed to each individual or ~~(Snip)~~

~~"Net zero energy building" means a building that, via combination of demand reduction measures, requires no net energy from the electric utility produces enough energy, including electricity and gas, that is equal to or greater than to meet the energy demand required consumed by the occupants in the building. (Snip)~~