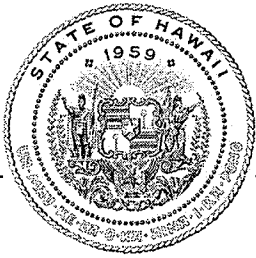


**SB 2235**



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

LINDA LINGLE  
GOVERNOR  
THEODORE E. LIU  
DIRECTOR  
MARK K. ANDERSON  
DEPUTY DIRECTOR

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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

**TRANSPORTATION, INTERNATIONAL & INTERGOVERNMENTAL AFFAIRS**

Thursday, January 28, 2010

2:45 pm

State Capitol, Conference Room 225

in consideration of

**SB2235**

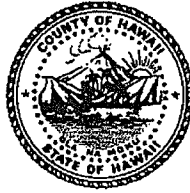
**RELATING TO PHOTOVOLTAIC READY NEW RESIDENTIAL HOMES.**

Chair Gabbard, Chair English, Vice Chair English, Vice Chair Gabbard, and Members of the Committees. The Department of Business, Economic Development, and Tourism (DBEDT) supports SB2235 which requires that homes built on or after January 1, 2012, include conduits, adequately sized subpanels and blueprints and labeling to facilitate the installation of photovoltaic systems. This bill is similar to an Administrative bill which has yet to be introduced.

The cost of including photovoltaic-equipment and blueprints should be minimal at the time of construction. Our discussions with the solar industry indicate that the cost to bring a new home to photovoltaic ready is about \$100 to \$500 per home, but the cost to retrofit a home is several thousands of dollars. Therefore, these preparatory measures will help homeowners reduce their cost and transition to a renewable future. As public awareness of the need reduce oil imports and increase local employment grows, it is expected that photovoltaics will become increasingly popular.

Thank you for the opportunity to provide these comments.

William P. Kenoi  
*Mayor*



Stephen J. Arnett  
*Housing  
Administrator*

**County of Hawaii**  
**OFFICE OF HOUSING AND  
COMMUNITY DEVELOPMENT**  
50 Wailuku Drive • Hilo, Hawai'i 96720-2484  
V/TT (808) 961-8379 • FAX (808) 961-8685

January 26, 2010

The Honorable Mike Gabbard, Chair  
The Honorable J. Kalani English, Vice Chair  
and Committee Members  
Committee on Energy and Environment

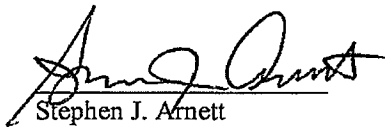
Twenty-Fifth Legislature  
Regular Session of 2010

**SUBJECT: Senate Bill 2235**  
**Hearing Date: 01-28-2010**  
**Time: 2:45 PM**  
**Conference Room: 225**

The Office of Housing and Community Development (OHCD) **opposes** Senate Bill 2235 which requires all single-family dwelling to be photovoltaic-ready. While the OHCD supports the concept of renewable energy, the requirement will result in increased costs to developers, which will be passed on to the homeowners, increasing the cost of housing, regardless of income level. For developers of affordable housing projects, this escalated cost may negatively impact the viability of the project.

The Legislature should instead provide incentives to developers that are willing to invest in such high levels of renewable energy.

Thank you for the opportunity to provide testimony.

  
Stephen J. Arnett  
Housing Administrator

**BIA-HAWAII**  
BUILDING INDUSTRY ASSOCIATION

January 28, 2010

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

And

The Honorable Kalani English, Chair and Member  
Committee on Transportation, International and Intergovernmental Affairs  
State Senate  
State Capitol, Room 225  
Honolulu, Hawaii 96813

Dear Chairs Gabbard and English and Members:

**Subject: Senate Bill No. SB 2235 Relating to Photovoltaic Ready New Residential Homes**

I am Karen Nakamura, Chief Executive Officer of the Building Industry Association of Hawaii (BIA-Hawaii). Chartered in 1955, the Building Industry Association of Hawaii is a professional trade organization affiliated with the National Association of Home Builders, representing the building industry and its associates. BIA-Hawaii takes a leadership role in unifying and promoting the interests of the industry to enhance the quality of life for the people of Hawaii.

**BIA-HAWAII strongly opposes S.B. No. 2235.**

The bill proposes to amend Chapter 196 HRS to require all new single-family residential construction, after January 1, 2012, to incorporate design elements and minimal equipment installation to make the structure “photovoltaic-ready” at the time of initial construction and will facilitate widespread adoption of photovoltaic systems in the future.

The intent stated in this legislation is:

“To optimize future gains from solar technology adoption. Photovoltaic-ready requirements will ensure that new residential construction is designed to reap the maximum benefits of future solar technology installations, thus reducing potential cost-recoupment periods after solar technologies are installed. Widespread adoption of solar technologies on residential buildings will result in reduced energy demand on the grid and reduced greenhouse gas emissions. Individuals

who choose to install solar technologies will benefit from reduced electricity costs; that savings can be substantial depending on fossil fuel prices. This policy also helps to develop a market for solar technology construction and design and increases awareness of solar technologies in the construction industry for homeowners in general. These are crucial factors in addressing barriers to solar adoption.”

This appears to be a follow up to the Mandatory Solar legislation (SB 644, Act 204, 2008 SLH) which mandated solar water heaters be installed on all new single family residences constructed after January 1, 2010.

BIA-Hawaii is strongly opposed to “government mandates” that are not related to “public health and safety” issues. Also, why is it that these “government mandates” are always portrayed as having significant long-term social gains (i.e. Widespread adoption of solar technologies on residential buildings will result in reduced energy demand on the grid and reduced greenhouse gas emissions), but shift the cost on one segment of the community (i.e. new home buyers).

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 or install a photovoltaic system, as opposed to placing this requirement on only new units (approximately 5,700 new units were constructed in 2006)? Why do you think the focus was on new units as opposed to existing?

The bill also does not recognize the fact that each photovoltaic system is unique or specific for that particular project. Therefore any prior installations may be obsolete and cost more to remove and install new.

We believe that the choices, not mandates should be the role of government especially when the government intervention goes beyond its basic role of providing for our public health, safety or welfare. We do not support government interference in the free market system. The choice of whether or not one chooses a photovoltaic system for a homeowner should be governed by market incentives rather than regulation. Compliance with these types of regulations will increase the cost of the homes in Hawaii, and impact the delivery of affordable housing units.

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

*Karen I. Nakamura*



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January 27, 2010

**The Honorable Mike Gabbard, Chair**

Senate Committee on Energy and Environment

**The Honorable J. Kalani English, Chair**

Senate Committee on Transportation, International & Intergovernmental Affairs

State Capitol, Room 312

Honolulu, Hawaii 96813

**RE: S.B. 2235 Relating to Taxation**

**HEARING: Thursday, January 28, 2010 at 2:45 p.m.**

Aloha Chair Gabbard, Chair English, and Members of the Joint Committees:

I am Myoung Oh, Government Affairs Director, here to testify on behalf of the Hawai'i Association of REALTORS® ("HAR"), the voice of real estate in Hawai'i, and its 8,800 members in Hawai'i. HAR **supports the intent** of S.B. 2235, requiring new single-family residences constructed after January 1, 2012 to be built to facilitate installation of photovoltaic electrical power systems.

It is the goal of the State of Hawaii to reach the goal of 70 percent clean, renewable energy by the year 2030. This measure would help contribute to that goal by requiring new single-family residences to incorporate design elements and minimal equipment installation so as to facilitate the future adoption of photovoltaic systems.

HAR looks forward to working with our state lawmakers in building better communities by supporting quality growth, seeking sustainable economies and housing opportunities, embracing the cultural and environmental qualities we cherish, and protecting the rights of property owners.

Mahalo for the opportunity to testify.





# Sierra Club Hawai'i Chapter

PO Box 2577, Honolulu, HI 96803  
808.538.6616 hawaii.chapter@sierraclub.org

## SENATE COMMITTEE ON ENERGY AND ENVIRONMENT SENATE COMMITTEE ON TRANSPORTATION, INTERNATIONAL AND INTERGOVERNMENTAL AFFAIRS

January 28, 2010, 2:45 P.M.

(Testimony is 1 page long)

### TESTIMONY IN STRONG SUPPORT OF SB 2235

Aloha Chair English, Chair Gabbard, and Members of the Committees:

The Sierra Club, Hawai'i Chapter strongly supports SB 2235, which requires all new buildings to contain the necessary design components to readily incorporate a photovoltaic system.

In order to meet Hawai'i's aggressive greenhouse gas reduction and energy security goals, it is necessary to transform the building sector, which accounts for 72% of electricity use<sup>1</sup> and over 36% of greenhouse gas emissions in the U.S.<sup>2</sup> Improving resource use of new buildings will also improve the future comfort and affordability of homes.

Buildings have a many-decade lifetime, and today's buildings will continue to be a majority of all buildings in 2050. Without a focused effort to reduce energy demand in existing buildings, it will be virtually impossible to meet even the most modest greenhouse gas reduction targets.

While this measure may not, by itself, solve Hawai'i's energy problems, it is a strong step towards providing clean energy for everyone.

Thank you for this opportunity to provide testimony.

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<sup>1</sup> Buildings Energy Data Book September 2007: 1.1 Buildings Sector Energy Consumption.

<sup>2</sup> EIA 2006: Emissions of Greenhouse Gases in the United States.



January 28, 2010

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

And

The Honorable Kalani English, Chair and Member  
Committee on Transportation, International and Intergovernmental Affairs  
State Senate  
State Capitol, Room 225  
Honolulu, Hawaii 96813

Dear Chairs Gabbard and English and Members:

**Subject: Senate Bill No. SB 2235 Relating to Photovoltaic Ready New Residential Homes**

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 strongly opposes S.B. No. 2235.**

The bill proposes to amend Chapter 196 HRS to require all new single-family residential construction, after January 1, 2012, to incorporate design elements and minimal equipment installation to make the structure "photovoltaic-ready" at the time of initial construction and will facilitate widespread adoption of photovoltaic systems in the future.

The intent stated in this legislation is:

"To optimize future gains from solar technology adoption. Photovoltaic-ready requirements will ensure that new residential construction is designed to reap the maximum benefits of future solar technology installations, thus reducing potential cost-recoupment periods after solar technologies are installed. Widespread adoption of solar technologies on residential buildings will result in reduced energy demand on the grid and reduced greenhouse gas emissions. Individuals



who choose to install solar technologies will benefit from reduced electricity costs; that savings can be substantial depending on fossil fuel prices. This policy also helps to develop a market for solar technology construction and design and increases awareness of solar technologies in the construction industry for homeowners in general. These are crucial factors in addressing barriers to solar adoption.”

This appears to be a follow up to the Mandatory Solar legislation (SB 644, Act 204, 2008 SLH) which mandated solar water heaters be installed on all new single family residences constructed after January 1, 2010.

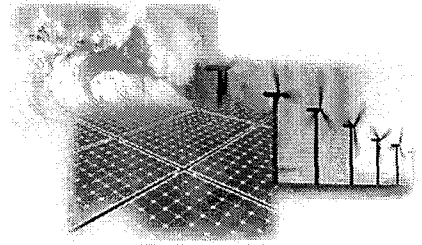
The Chamber of Commerce of Hawaii is strongly opposed to “government mandates” that are not related to “public health and safety” issues. Also, why is it that these “government mandates” are always portrayed as having significant long-term social gains (i.e. Widespread adoption of solar technologies on residential buildings will result in reduced energy demand on the grid and reduced greenhouse gas emissions), but shift the cost on one segment of the community (i.e. new single family home buyers who are most often young couples and/or young families who can least afford the ever increasing cost burden of federal, State and county government mandates).

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 or install a photovoltaic system, as opposed to placing this requirement on only new units (approximately 5,700 new units were constructed in 2006)? Why do you think the focus was on new units as opposed to existing?

Government mandates and policies must be reconciled and balanced. While it is important to reduce our reliance on foreign oil, we must also supply new housing stock for a growing need. Unfunded or non incentivized mandates are not equitable and in this proposal, only targets a small segment of the community, homebuyers of a new single family home. The resulting magnitude is a small scale effect of creating home energy efficiencies as compared to driving up the cost of new single family homes.

With the number of new units projected to be constructed in 2010 running at a pace that is expected to be less than half the 2006 number, what is needed are incentives to build more units and create more jobs, not more unfunded mandates. We believe that the choices, not mandates should be the role of government especially when the government intervention goes beyond its basic role of providing for our public health, safety or welfare. We do not support government interference in the free market system. The choice of whether or not one chooses a photovoltaic system for a homeowner should be governed by market incentives rather than regulation. Compliance with these types of regulations will increase the cost of new homes in Hawaii, and adversely impact the construction (i.e. jobs) and delivery of affordable housing units (already a very difficult proposition in Hawaii).

Thank you for this opportunity to express our views.



**SENATE COMMITTEE ON ENERGY AND ENVIRONMENT  
COMMITTEE ON TRANSPORTATION, INTERNATIONAL  
AND INTERGOVERNMENTAL AFFAIRS**

January 28, 2010, 2:45 P.M.  
Room 225

**(Testimony is 2 pages long)**

**TESTIMONY IN SUPPORT OF SB 2235**

Chairs Gabbard and English and members of the committees:

The Blue Planet Foundation supports Senate Bill 2235, a measure requiring new homes built after January 1, 2012, be constructed to be "photovoltaic ready." The idea behind this policy is to ensure homes designed today are ready for 21<sup>st</sup> century technology and that the costs of adopting new clean technologies are kept to a minimum. Blue Planet believes that this measure could be expanded to require other solar-ready features in new homes (see amendments at end of testimony).

Starting in 2010, most new homes will be built with solar water heaters already installed, thanks to the historic Solar Roofs law the legislature passed in 2008. Now it is time to expand the benefits of solar power to future homebuyers by ensuring that new homes will be ready for photovoltaic systems. This policy requires that new single-family residential construction incorporate solar design elements and minimal equipment installation (such as wiring conduits) to enable the home to easily be converted to solar electric power.

Hawai'i is blessed with solar energy. The islands are the "Saudi Arabia of sun," with the average home rooftop receiving the equivalent of 19 gallons of gasoline in the form of sunshine each day. New homes—and 25% of existing homes—currently use solar water heaters to reduce the demand for electric water heating (which can use up to 40% of the total energy use of the home). Less than 1% of homes use photovoltaic (PV), or solar electric, to power their homes, although the percentage is growing rapidly. As the costs of PV systems continue to fall, the installation of residential PV systems will become increasingly cost effective. The installation of these systems on existing homes, however, is sometimes impeded by design features implemented at the time of construction that limit the physical space available for PV systems and related equipment.

This measure would reduce the impediments to installing PV on homes built after 2012. While this is a relatively new policy option across the country, solar ready policies are being implemented in a variety of states and municipalities, including New Mexico, Colorado, Tucson, California, and New Jersey.

Blue Planet proposes that SB 2235 be amended to include further requirements on new homes in order to maximize the benefit of solar energy to the future homeowner. These requirements could include:

- Requiring that some amount of the roof space be unimpeded and south-facing with a 15% to 25% pitch; and
- Designating roof space for PV equipment, including installing the mandatory solar hot water heating system in a location that does not inhibit future PV installation.

Thank you for the opportunity to testify.