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## HOUSE COMMITTEE ON ENERGY & ENVIRONMENTAL PROTECTION

### TESTIMONY REGARDING HB 2005 RELATING TO RENEWABLE ENERGY TECHNOLOGIES

TESTIFIER: KURT KAWAFUCHI, DIRECTOR OF TAXATION (OR DESIGNEE)

DATE: FEBRUARY 26, 2008

TIME: 11:00AM

ROOM: 308

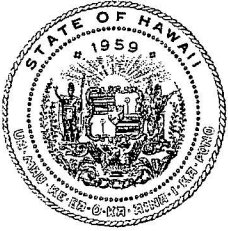
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This bill would replace the photovoltaic energy system category of § 235-12.5, HRS with a newly defined category of solar electric energy systems.

The Department of Taxation has concerns with this legislation.

The Department does not like this additional definition and prefers that a definition in this credit focus on what is put into a machine rather than an approach based upon what the machine creates. In short, the Department prefers defining the technology based upon inputs; not outputs. As the law is currently drafted, renewable energy technologies are defined based upon the type of renewable resource that enters a system (*e.g.*, wind, sun, light). This legislation would amend the law to add an additional credit component for what is created (*e.g.*, solar water heating, solar air conditioning, solar space heating, solar drying, and solar process heat system).

Based upon the Department's estimates, this legislation will not have an impact on the general fund. It is assumed that all "solar electric" systems would have previously qualified under "solar thermal" or "photovoltaic." Thus, the only change would be in the maximum credit amounts for previously "solar thermal" systems.



**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

**HOUSE COMMITTEE ON FINANCE**

Tuesday, February 26, 2008

11:00 a.m.

State Capitol, Conference Room 308

in consideration of

**HB2005**

**RELATING TO RENEWABLE ENERGY TECHNOLOGIES.**

Chair Oshiro, Vice Chair Lee, and Members of the Committee.

The Department of Business, Economic Development, and Tourism (DBEDT) supports HB2005. We defer to the Department of Taxation on tax implications.

HB2005 replaces the term "photovoltaic system" with "solar electric energy system" so that solar thermal systems which produce electricity (as opposed to simply heating water) would be eligible for the same income tax credit as photovoltaic systems.

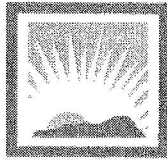
Solar thermal electric systems are in the same general cost range as photovoltaic systems, and the end product is also electricity. The proposed change would allow a solar thermal electric system to displace a similar sized photovoltaic system, so the estimated revenue impact is zero.

We also do not anticipate any revenue impact from the proposed change in the definition of "Solar Thermal Energy System" to "include solar water heating, solar air conditioning, solar space heating, solar drying, and solar process heat systems." The proposed change is adding

detail but not changing what is commonly understood to be included under the meaning of "solar thermal."

The use of solar energy to meet our energy needs is consistent with State energy objectives.

Thank you for the opportunity to offer these comments.



**Hawaii Solar Energy Association**  
*Serving Hawaii Since 1977*

TESTIMONY OF THE HAWAII SOLAR ENERGY ASSOCIATION  
IN REGARD TO H.B. 2005  
RELATING TO RENEWABLE ENERGY TECHNOLOGIES  
BEFORE THE  
HOUSE COMMITTEE ON FINANCE  
ON  
TUESDAY, FEBRUARY 26, 2008

Chair Oshiro, Vice-Chair Lee and members of the committee, my name is Rick Reed and I represent the Hawaii Solar Energy Assn (HSEA). The HSEA is a professional trade association established in 1977, and affiliated with the Solar Energy Industries Association (SEIA) in Washington, D.C. HSEA represents manufacturers, distributors, contractors, financiers, and utility companies active in the solar energy industry in Hawaii. We strongly support the passage of H.B. 2005.

The realm of solar energy includes both heat (solar thermal) and light (solar electricity). Solar thermal energy is particularly versatile in that it can be used to provide air conditioning, to heat water and air, or to generate electricity. High temperature solar thermal steam generators, often referred to generically as concentrating solar power (CSP) technologies, are capable of generating enormous amount of electricity.

H.B. 2005 provides a definitional change (line 15) that acknowledges that both PV and solar thermal systems are capable of generating electricity. The bill deletes the reference to “photovoltaic energy systems” and replaces it with “solar electric energy systems”, which is more accurate and clarifies the range of solar technologies capable of generating power.

H.B. 2005 also provides a definition for qualifying “solar thermal energy systems” – that Do Not generate electricity – to include solar water heating, solar air conditioning, solar space heating, solar drying, and solar process heat systems.

These changes provide clarity to the law and make this statute more consistent with the real world technical applications for solar energy.

Thank you for the opportunity to testify.

# HAWAII RENEWABLE ENERGY ALLIANCE

46-040 Konane Place #3816, Kaneohe, HI 96744 – Telephone/FAX: 247-7753 – Email: [wsb@lava.net](mailto:wsb@lava.net)

## **Officers**

President  
Warren S. Bollmeier II

Vice-President  
John Crouch

## **Directors**

Warren S. Bollmeier II  
WSB-Hawaii

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 HOUSE COMMITTEE ON ENERGY AND ENVIRONMENTAL PROTECTION

### HB 2005, RELATING TO RENEWABLE ENERGY TECHNOLOGIES

January 24, 2007

Chair Morita, Vice-Chair Carroll and members of the Committee 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 purpose of HB 2005 is to expand the renewable energy technologies tax credit to include solar electric energy systems. Specifically, the section on "Photovoltaic energy systems" is amended to read "Solar electric energy systems." Solar electric systems are defined as "solar thermal electric and photovoltaic systems." The term "solar thermal systems" is also defined.

HREA supports this bill as it clearly distinguishes the two types of solar systems (solar thermal and solar electric), which are subject to different Renewable Energy Technology Income Tax Credit ("RETITC") treatments. This is particularly important as there are more types of solar systems that are being installed in or being considered for Hawaii.

Solar thermal systems include the solar water heating (flat-plate collectors) that we see now on at least 25% of our single-family homes in Hawaii. While the flat-plate collectors are used to heat our water, solar thermal electric systems use technologies, such as parabolic dish troughs, to heat water or a working fluid to higher temperatures in order to generate electricity. A utility scale parabolic dish trough system is currently under development in Hawaii.

Thank you for this opportunity to testify.



COLLEGE OF SOCIAL SCIENCES

# HAWAII ENERGY POLICY FORUM

UNIVERSITY OF HAWAII AT MĀNOA

## Hawai'i Energy Policy Forum

Mr. Robbie Alm, HECO  
Ms. Amy Asselbayer, Ofc of US Rep.  
Neil Abercrombie  
Ms. Catherine Awakuni, Div. of  
Consumer Advocacy  
Mr. Warren Bollmeier  
Hi Renewable Energy Alliance  
Mr. Carliito Caliboso, PUC (Observer)  
Mr. Albert Chee, Chevron  
Mr. Kyle Datta, U.S. Biofuels  
Sen. Kalani English, Hi State Senate  
Mr. Mitch Ewan, UH HNEI  
Mr. Carl Freedman  
Haiku Design and Analysis  
Mr. Mark Glick, OHA  
Mr. Steve Golden, The Gas Company  
Dr. Michael Hammett, RCUH  
Ms. Paula Helfrich, EDAH  
Mr. William Kaneko, HI Institute for  
Public Affairs  
Mr. Darren Kimura, Energy Industries  
Holdings  
Mr. Mike Kitamura, Ofc of US Sen.  
Daniel K. Akaka  
Mr. Kai Kobayashi, Maui County  
Mr. Laurence Lau, DOH  
Ms. Yvonne Lau, Ofc of US Rep.  
Mazie Hirono  
Mr. Allyn Lee, C&C of HNL  
Mr. Aaron Leong, Ofc of US Senator  
Daniel K. Inouye  
Dr. Stephen Meder, AIA-Honolulu  
Sen. Ron Menor, Hi State Senate  
Dr. Jeff Mikulina, Sierra Club  
Dr. Bruce Miller, UH Ofc of  
Sustainability  
Dr. Sharon Miyashiro, Social  
Sciences Public Policy Ctr.  
Rep. Hermina Morita, HI State  
House of Representatives  
Mr. Tim O'Connell, USDA/Rural  
Development  
Mr. Richard Paglinawan  
Pa Ku'i A Lua  
Ms. Melissa Pavlicek, Western States  
Petroleum Assn  
Mr. Randy Perreira, HI State AFL-CIO  
Mr. Rick Reed, Inter-Island  
Solar Supply  
Dr. Rick Rocheleau, UH HNEI  
Mr. Peter Rosegg, HECO  
Mr. Steven Rymsha, KIUC  
Mr. Riley Saito, PowerLight Corp.  
Mr. Glenn Sato, Kauai County OED  
Mr. Bill Short, BIA of Hawaii  
Mr. Ray Starling, HI Energy Grp  
Mr. Lance Tanaka, Tesoro HI Corp  
Dr. Don Thomas, UH Center for the  
Study of Active Volcanoes  
Mr. Murray Towill, Hawai'i  
Hotel Assn  
Ms. Joan White, Hon Community  
Action Program

Testimony of  
**Warren Bollmeier**  
Co-Chair – Renewable Energy Working Group  
Hawai'i Energy Policy Forum

House Committee on Finance  
Tuesday, February 26, 2008  
11:00 a.m.; Agenda #2  
Conference Room 308

## IN SUPPORT OF H.B. 2005 - Relating to Renewable Energy Technologies

I am Warren Bollmeier, Co-Chair of the Renewable Energy Working Group of the Hawaii Energy Policy Forum ("Forum"). The Forum is comprised of 46 representatives from the electric utilities, oil and natural gas suppliers, environmental and community groups, renewable energy industry, and federal, state and local government, including representatives from the neighbor islands. We have been meeting since 2002 and have adopted a common vision and mission, and a comprehensive "10 Point Action Plan," which serves as a framework and guide for meeting our preferred energy vision and goals. The Forum supports the passage of HB 2005 as it helps achieve the goal of Point One - expand renewable energy opportunities.

The purpose of HB 2005 is to expand the renewable energy technologies tax credit to include solar electric energy systems. Specifically, the section on "Photovoltaic energy systems" is amended to read "Solar electric energy systems." Solar electric systems are defined as "solar thermal electric and photovoltaic systems." The term "solar thermal systems" is also defined. The Forum supports this bill as it clearly distinguishes the two types of solar systems (solar thermal and solar electric), which are subject to different Renewable Energy Technology Income Tax Credit ("RETITC") treatments. This is particularly important, as there are more types of solar systems that are being installed in or being considered for Hawaii.

Solar thermal systems include the solar water heating (flat-plate collectors) that we see now on at least 25% of our single-family homes in Hawaii. While the flat-plate collectors are used to heat our water, solar thermal electric systems use technologies, such as parabolic dish troughs, to heat water or a working fluid to higher temperatures in order to generate electricity. A utility scale parabolic dish trough system is currently under development in Hawaii.

Thank you for this opportunity to testify.

*This testimony reflects the position of the Forum as a whole and not necessarily of the individual Forum members or their companies or organization*



To: House Sgt. At Arms Office	From: Jon Ishikawa – Project Manager
Fax: 808-586-6001	Fax: 808-356-0565
Phone:	Phone: 808-778-9840

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Date: 2/25/2008	Pages 1 page + cover sheet
Subject: Testimony in support of HB 2005, FIN Committee hearing Feb 26, 2008	

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Comments:

Sopogy Inc. submits the following testimony in support of **HB 2005, Agenda #2** to be heard by the House **Committee on Finance** on **February 26, 2008** at **11:00 am** in **Conference Room 308**. This testimony should be sent to the following individuals:

Representative Marcus Oshiro, Chair, FIN  
Representative Marilyn Lee, Vice-chair, FIN

Please make 5 copies of this testimony. If you have any questions, please contact me at my number listed below.

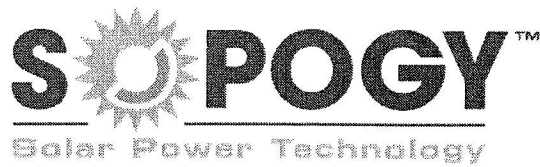
Mahalo,

Jon Ishikawa  
Project Manager

Sopogy - Solar Power Technology  
Direct Phone: (808) 778-9840  
Direct Fax: (808) 356-0565  
[www.sopogy.com](http://www.sopogy.com)



Power | Process Heat | Air Conditioning



**To: Representative Marcus Oshiro, Chair  
Committee on Finance**

**From: Sopogy Inc.**

**Date: February 26, 2008**

**Subject: Support for HB 2005 – Relating to Renewable Energy Technologies**

Chair Oshiro, Vice-Chair Lee and Members of the Committees:

Sopogy, Inc. is a solar power technology company based in Hawaii. Our purpose is to bring renewable solar energy technologies to Hawaii and its people for the betterment of our environment, independence from volatile imported fossil fuels, and energy stability.

Sopogy has developed a concentrating solar panel that enables the production of electricity, air conditioning, and/or process heat using the sun's power. Our technology is not categorized as Photovoltaic but as Solar Thermal and/or Concentrating Solar Power (CSP). Understanding, therefore, that solar generated electricity can come from a broader range of technologies than just photovoltaic (PV), Sopogy supports this bill's language that would broaden the investment tax credit to all solar electric technologies.

In general, Sopogy, Inc. supports the adoption of renewable energy and energy efficiency measures that lessen the state's dependence on oil, reduce greenhouse gas emissions, and provide energy price stability to Hawaii's consumers.

Thank you for this opportunity to testify.



Power | Process Heat | Air Conditioning





TESTIMONY OF SUNEDISON, LLC IN REGARD TO HB2005  
RELATING TO A RENEWABLE ENERGY TECHNOLOGIES, TAX CREDIT  
BEFORE THE HOUSE COMMITTEE ON FINANCE  
TUESDAY, FEBRUARY 26, 2008 AT 11:00AM

Chair Oshiro, Vice-Chair Lee and Members of the Committee.

SunEdison is a developer of large solar electric photovoltaic systems. We have seven offices in five states including an office in Hawaii. Our goal is to simplify the installation of solar electric resources so that the benefits of solar energy, particularly the reduction in oil-fired grid-supplied electricity, can be realized in Hawaii.

SunEdison does not oppose HB2005. We believe that broadening access to the tax credit will help diversify Hawaii's energy markets and reduce Hawaii's dependence on imported energy. However, there is an important related issue.

We also ask the Committee to modify the current legislation to allow for the transferring of the tax credit through inserting at the end of Section 1 "(h). The owner of a facility may transfer a tax credit for the facility in exchange for a cash payment equal to the present value of the tax credit." This provision will also help to increase solar energy in Hawaii thereby diversifying Hawaii energy markets and reducing Hawaii's dependence on imported energy.

Currently, the tax credit is transferable within a partnership. However, this is a complex and cumbersome process, and results in difficulties structuring effective projects. The end result is higher costs.

The State of Oregon has a simple pass-through/transfer provision (similar to the one requested above) that has been helpful in expanding their solar program. In this system a project owner may transfer a tax credit to a partner in return for a lump-sum cash payment (the net present value of the tax credit) upon completion of the project. This system allows non-profit organizations, schools, governmental agencies, tribes, other public entities and businesses with and without tax liability to use the tax credit by transferring their tax credit for an eligible project to a partner with a tax liability.<sup>1</sup>

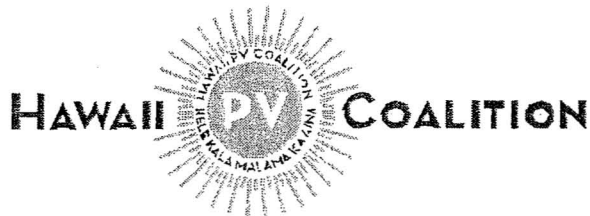
Making these credits easier to use will help Hawaii reduce its dependence on imported fuels, keep energy dollars at home and expand the use of local natural and human capital.

We would like to thank the Committee for the opportunity to submit testimony and for the Committee's consideration.

Rick Gilliam  
Managing Director, Western States Policy

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<sup>1</sup> [http://www.dsireusa.org/library/includes/incentive2.cfm?Incentive\\_Code=OR03F&state=OR&CurrentPageID=1](http://www.dsireusa.org/library/includes/incentive2.cfm?Incentive_Code=OR03F&state=OR&CurrentPageID=1)



The **Solar Alliance**

**LATE**

TESTIMONY OF THE SOLAR ALLIANCE AND THE HAWAII PV COALITION  
IN REGARD  
HB 2005 RELATING TO RENEWABLE ENERGY TECHNOLOGIES  
BEFORE THE  
BEFORE THE HOUSE COMMITTEE ON FINANCE  
ON  
TUESDAY, FEBRUARY 26, 2008 AT 11:00AM

Chair Oshiro, Vice-Chair Lee and Members of the Committee.

The Hawaii PV Coalition is a non-profit organization that represents installers, suppliers, manufacturers and customers of solar electric systems in the state of Hawaii.<sup>1</sup> The Solar Alliance is a state-focused alliance of solar manufacturers, integrators and financiers dedicated to accelerating the promise of photovoltaic (PV) energy in the United States.<sup>2</sup> The Hawaii PV Coalition and the Solar Alliance supports HB 2005. We believe broadening the access to the tax credit will help diversify Hawaii's energy markets and reduce Hawaii's dependence on imported energy.

We also ask the Committee to modify the current legislation to allow for the transferring of the tax credit through inserting in Section 1 "The owner of a facility may transfer a tax credit for the facility in exchange for a cash payment equal to the present value of the tax credit." This provision will also help to increase solar energy in Hawaii thereby diversifying Hawaii energy markets and reduces Hawaii's dependence on imported energy.

Currently, the tax credit is transferable within a partnership. However, this is a much more complex and cumbersome process, and results in difficulties structuring effective projects. The end result is higher costs.

The State of Oregon has a simple pass-through/transfer provision (similar to the one requested above) that has been helpful in expanding their solar program. In this system a project owner may transfer a tax credit to a partner in return for a lump-sum cash payment (the net present value of the tax credit) upon completion of the project. This system allows non-profit organizations, schools, governmental agencies, tribes, other

<sup>1</sup> The Hawaii PV Coalition, <http://www.hawaiipvcoalition.org/>

<sup>2</sup> The Solar Alliance, <http://solaralliance.org/>

public entities and businesses with and without tax liability to use the tax credit by transferring their tax credit for an eligible project to a partner with a tax liability.<sup>3</sup>

Making these credits easier to use will help Hawaii create fixed cost of energy, reducing the dependence of imported fuels, and expand the use of local natural and human resources.

We would like to thank the Committee for the opportunity to submit testimony and for the Committee's consideration.

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<sup>3</sup>DSIRE Incentives by State Incentives in Oregon,  
[http://www.dsireusa.org/library/includes/incentive2.cfm?Incentive\\_Code=OR03F&state=OR&CurrentPageID=1](http://www.dsireusa.org/library/includes/incentive2.cfm?Incentive_Code=OR03F&state=OR&CurrentPageID=1)