TESTIMONY OF HERMINA MORITA
CHAIR, PUBLIC UTILITIES COMMISSION
DEPARTMENT OF BUDGET AND FINANCE
STATE OF HAWAII
TO THE
HOUSE COMMITTEE ON
ENERGY & ENVIRONMENTAL PROTECTION

FEBRUARY 4, 2014
8:30 a.m.

MEASURE: H.B. No. 2618
TITLE: Relating to Energy Storage

Chair Lee and Members of the Committee:

DESCRIPTION:

This measure would establish an income tax credit system for individuals and corporate tax payers who install and place into service after December 31, 2014 a "grid-connected energy storage property" as defined in the bill. The amounts for both the investment and utilization tax credit options are currently unspecified.

POSITION:

The Commission would like to offer the following comments for the Committee's consideration.

COMMENTS:

As the Commission testified regarding H.B. No. 2619, relating to energy storage, energy storage has a role in Hawaii's strategy to achieve its clean energy policy goals through the development of a diverse and cost-effective portfolio of renewable resource and alternative energy options, but it should be recognized that energy storage is not a panacea. Hawaii also has the added advantage where a variety of technologies are be found to be cost-effective in the right application to increase the integration of renewable and other system benefits, given the high cost of energy.

The Commission cautions the Legislature in selecting one type of technology to incentivize over others. Each kind of technology or program that can provide ancillary services has characteristics to address specific conditions when balancing Hawaii's electric system to ensure reliability.

Thank you for the opportunity to testify on this measure.

DEPARTMENT OF BUSINESS, ECONOMIC DEVELOPMENT & TOURISM

NEIL ABERCROMBIE
GOVERNOR

RICHARD C. LIM
DIRECTOR

MARY ALICE EVANS
DEPUTY DIRECTOR

No. 1 Capitol District Building, 250 South Hotel Street, 5th Floor, Honolulu, Hawaii 96813
Mailing Address: P.O. Box 2359, Honolulu, Hawaii 96804
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Statement of
Richard C. Lim
Director
Department of Business, Economic Development, and Tourism
before the
HOUSE COMMITTEE ON ENERGY AND ENVIRONMENTAL PROTECTION

Tuesday, February 4, 2014
8:30 a.m.
State Capitol, Conference Room 325

in consideration of
HB 2618
RELATING TO ENERGY STORAGE.

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

The Department of Business, Economic Development and Tourism (DBEDT) respectfully offers comments on HB 2618 which establishes an investment tax credit and utilization tax credit for individuals or corporations that install grid-connected energy storage properties. DBEDT appreciates the importance of adding energy storage capacity to Hawaii's electrical grids.

DBEDT is concerned that this measure may be inconsistent with the State's established energy policy directives of balancing technical, economic, environmental, and cultural considerations and letting the market decide. DBEDT also notes that it is unable to do the study contemplated in HB 2618 without additional resources and is concerned over its ability to secure information necessary to conduct the report given the privacy laws on taxpayer data. DBEDT defers to the Department of Taxation on the fiscal implications of this bill.

Thank you for the opportunity to offer these comments.

NEIL ABERCROMBIE
GOVERNOR

SHAN TSUTSUI
LT. GOVERNOR

FREDERICK D. PABLO
DIRECTOR OF TAXATION

JOSHUA WISCH
DEPUTY DIRECTOR

STATE OF HAWAII
DEPARTMENT OF TAXATION
P.O. BOX 259
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To: The Honorable Chris Lee, Chair
and Members of the House Committee on Energy and Environmental Protection

Date: Tuesday, February 04, 2014
Time: 8:30 a.m.
Place: Conference Room 325, State Capitol

From: Frederick D. Pablo, Director
Department of Taxation

Re: H.B. No. 2618, Relating to Energy Storage

The Department of Taxation (Department) appreciates the intent of H.B. 2618 to support the renewable energy industry and provides the following comments for the Committee's consideration.

H.B. 2618 creates an income tax credit for grid-connected energy storage properties. The credit is nonrefundable but can be converted to a refundable credit at the taxpayer's election to accept a 30% discount on the amount of the credit. The tax credit can be claimed as an investment credit equal to an unspecified percentage of the basis or as a utilization credit equal to the product of the capacity of the property and the number of days for which the credit applies multiplied by an unspecified number of cents.

The credit applies to grid-connected energy storage properties which are installed and placed in service during a taxable year beginning after December 31, 2014 and before December 31, 2025. Both the investment and utilizations credit calculations are separated into two paragraphs for grid-connected storage property first placed in service on or before December 31, 2020 and after December 31, 2020 but on or before December 31, 2025.

The Department offers the following technical comments for your consideration.

First, the grid-connected energy storage property as described in this measure already qualifies as an accessory under the Renewable Energy Technologies Income Tax Credit (RETITC) provided under section 235-12.5, Hawaii Revised Statutes (HRS), if installed with the energy producing portion of the system. The Department will defer to the Department of Economic Development, Business, and Tourism, as to whether an additional tax credit should be

provided to store electricity.

Second, the Department suggests that one method of computing the credit be chosen. Two methods of calculation will cause unnecessary confusion for taxpayers and difficulty for the Department in administering the credit and auditing the tax credit claims.

Third, the Department suggests the eligibility to claim the credit and the period in which the credit can be claimed be clarified. Subsection (a) states the credit is available to each individual or corporate taxpayer that files an individual or corporate net income tax return for a taxable year may claim the credit. The Department suggests that subsection (a) be amended to read:

> (a) There shall be allowed to any taxpayer subject to taxes under this chapter an income tax credit for each grid-connected energy storage property that is installed and placed in service in the State during the taxable year beginning after December 31, 2014 and not be available for taxable years beginning after December 31, 2025. The tax credit may be claimed in either, but not both, of the following forms:

The Department similarly recommends that subsection (j)(1)(B) be amended to read:

> (B) Taxpayer type;

These amendments will clarify which taxpayers are eligible to claim the tax credit and the period in which the tax credit is available.

Fourth, subsection (c) states that the allocation of the credit will follow HRS section 235-110.7; this HRS section leads to Internal Revenue Code section 704. Thus, for clarity, the Department suggests subsection (c) be amended to read:

> (c) In the case of a partnership, S corporation, estate, or trust, the tax credit allowable shall be for every eligible grid-connected energy storage property that is installed and placed in service in the State by the entity. The basis upon which the tax credit is computed shall be determined at the entity level. Distribution and share of credit shall be determined pursuant to section [~~235-110.7(a)~~] 704(b) of the Internal Revenue Code.

Lastly, the Committee may want to consider adding pre-certification requirements for claiming the tax credit, to be verified by a State agency with the technical capability of

determining whether the facility is type the State wishes to incentivize with this credit. As drafted, the credit will be very difficult for the Department to administer, as the Department does not have the expertise to verify that the utilization credit claims are accurate.

Thank you for the opportunity to provide comments.

HB2618
Submitted on: 2/3/2014
Testimony for EEP on Feb 4, 2014 08:30AM in Conference Room 325

Submitted By	Organization	Testifier Position	Present at Hearing
Doug McLeod	Mayor's Office County of Maui	Comments Only	No

Comments: We support extending the scope of the renewable energy tax credit to include storage of renewable energy, but see value in both off grid and grid tied systems. The existing tax credit for solar pv systems is the same whether the panels are used in an off grid or on grid configuration. We do not see why the tax treatment for the associated storage system should be different. Finally,we are surprised the draft language lacks a cap on the maximum amount of the credit allowable for one system. Doug McLeod Energy Commissioner

Please note that testimony submitted less than 24 hours prior to the hearing, improperly identified, or directed to the incorrect office, may not be posted online or distributed to the committee prior to the convening of the public hearing.

Do not reply to this email. This inbox is not monitored. For assistance please email webmaster@capitol.hawaii.gov

L E G I S L A T I V E

TAXBILLSERVICE

126 Queen Street, Suite 304 TAX FOUNDATION OF HAWAII Honolulu, Hawaii 96813 Tel. 536-4587

SUBJECT: INCOME, Grid connected energy storage tax credit

BILL NUMBER: HB 2618

INTRODUCED BY: C. Lee

BRIEF SUMMARY: Adds a new section to HRS chapter 235 to allow an individual or corporate net income taxpayer to claim an income tax credit for each grid-connected energy storage property that is installed and placed in service during a taxable year after December 31, 2014. The tax credit may be claimed in either, but not both, of the following forms:

Investment credit: An investment credit equal to: (1) for a grid-connected energy storage property first placed in service on or before December 31, 2020, not more than____% of the basis; or (2) for a grid-connected energy storage property first placed in service after December 31, 2020, and on or before December 31, 2025, not more than ____% of the basis; or:

Utilization credit: A utilization credit equal to: (1) for a grid-connected energy storage property first placed in service on or before December 31, 2020, ____ cents per kilowatt-hour of energy storage capacity; or (2) for a grid-connected energy storage property first placed in service after December 31, 2020, and on or before December 31, 2025, ____ cents per kilowatt-hour of energy storage capacity. Permits the utilization credit to be claimed during each of the first ten taxable years that the grid-connected energy storage property is in service; provided that this annual utilization credit shall not exceed the product of the energy storage capacity measured in kilowatt-hours, multiplied by 365, multiplied by the applicable number of cents per kilowatt-hour.

Multiple owners of a grid-connected energy storage property shall be entitled to a single tax credit, and the tax credit shall be apportioned between the owners in proportion to their contribution to the basis of the grid-connected energy storage property. In the case of a partnership, S corporation, estate, or trust, the tax credit allowable shall be for every eligible grid-connected energy storage property that is installed and placed in service in the state by the entity. The basis upon which the tax credit is computed shall be determined at the entity level. Distribution and share of credit shall be determined pursuant to section 235-110.7(a).

Defines "basis," "energy storage capacity," "first placed in service" and "grid-connected energy storage property" for purposes of the measure.

Credits in excess of a taxpayer's income tax liability may be applied to subsequent income tax liability until exhausted. Requires all claims for the credit to be filed on or before the end of the twelfth month following the close of the taxable year. The director of taxation may adopt rules pursuant to HRS chapter 91 and prepare the necessary forms to claim the credit and may require proof of the claim for the credit.

For any grid-connected energy storage property, a taxpayer may elect to reduce the eligible credit amount by 30% and, if this reduced amount exceeds the amount of income tax payment due from the taxpayer, the excess of the credit amount over payments due shall be refunded to the taxpayer; provided that no refund on account of the tax credit allowed by this section shall be made for amounts less than $1. Allows an association of owners under HRS chapters 421I, 421J, 514A, or 514B may claim the credit allowed under this section in its own name for grid-connected energy storage property placed in service and located on common areas. No credit under this section shall be allowed to any federal, state, or local government or any political subdivision, agency, or instrumentality thereof.

Directs the department of taxation, in collaboration with the department of business, economic development, and tourism (DBEDT) to submit a report to the legislature on: (1) the number of grid-connected energy storage properties that have qualified for a tax credit during the preceding calendar year; (2) the total cost of the tax credit to the state during the taxable year; and (3) the estimated economic benefit that may be attributable to the grid-connected energy storage tax credit.

EFFECTIVE DATE: July 1, 2014

STAFF COMMENTS: The proposed measure would establish income tax credits to encourage the use of grid-connected energy storage technologies and systems. This measure would establish an investment credit of ___% of the basis or a utilization credit equal to ___ cents per kilowatt hours for such systems. However, such systems may already be eligible for the renewable energy technologies credit under HRS section 235-12.5; indeed, the IRS recently recognized, in PLR (Private Letter Ruling) 201308005, that such energy storage systems can be considered an integral part of a renewable energy system because it helps the underlying photovoltaic or wind system stabilize its output and thereby lessen its impact on the grid.

While the measure also proposes to define what types of storage property qualify for the proposed credit, consideration might be given to adopting the federal definitions of alternate energy devices which qualify for preferential treatment rather than attempting to make up rules and definitions that would be unique to Hawaii. At least administrators could look to the federal standards for these devices for guidance.

Instead of providing tax incentives via tax credits for the purchase of existing technology, lawmakers may want to take advantage of Hawaii's natural environment which lends itself to all sorts of possibilities to explore and develop more efficient means of harnessing the natural resources that pervade the Islands, from wind to sun to geothermal to hydrogen from Hawaii's vast resources, all of which could be further developed with the assistance and cooperation of government in Hawaii.

Digested 2/3/14

PRINCETON ENERGY GROUP

Innovation in Renewable Energy

STEVE TABER
Chairman and CEO

PRINCETON ENERGY GROUP'S
TESTIMONY IN SUPPORT OF HB 2618

HOUSE COMMITTEE ON ENERGY AND ENVIRONMENTAL PROTECTION
Tuesday, February 4, 2014 at 8:30a.m.
Conference Room 325

Good afternoon Chair Lee, Vice Chair Thielen, and members of the Committee:

Princeton Energy Group ("Princeton") supports HB2618 and respectfully requests that the Committee pass it out.

We are currently engaged in the Ikehu Molokai Project. The island of Molokai suffers from very high electric rates, a grid that is unstable electrically, and a large carbon footprint. The Ikehu Molokai project aims to solve these problems by converting the island's electric system to 100% renewable energy. This effort will require a mix of technologies and multiple phases, and it will be the work of several years. Nevertheless, we are committed to the success of the project. No modern electric grid of this significance has been converted from 100% carbon-based fuels to 100% renewable energy, so the Ikehu Molokai project will serve as an example of high levels of renewable energy penetration, while keeping rates affordable and the grid stable. As such, Molokai and Hawaii will serve as an example to other islands and to utilities and policy-makers all over the world.

In order to achieve a high penetration of renewable energy on Molokai's weak grid, it is necessary to install a large amount of energy storage. This is fundamentally different from the storage installations on larger grids, such as Oahu and Maui. On the larger grids, renewable energy projects must sometimes install relatively small amounts of storage to mitigate short-term fluctuations in output and prevent transient voltage spikes. This is sometimes called a "Smoothing" application of storage. The cost of such Smoothing storage is typically a small fraction of the overall cost of the renewable generation.

In contrast, on small grids such as Molokai's, it is necessary to install a large amount of storage to shift production from the hours when it is generated into the hours when the need is greatest. As such, it is very valuable, in that it converts low-value energy generated when it isn't needed to high-value energy available when the need is greatest. However, it is very

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Testimony of ERIK KVAM
President of Renewable Energy Action Coalition of Hawaii
e-mail: Kvam@REACHawaii.org

In SUPPORT of HB2618 RELATING TO ENERGY STORAGE

Before the
HOUSE COMMITTEE ON ENERGY & ENVIRONMENTAL PROTECTION

February 4, 2014 8:30 a.m.

Good morning, Chair Lee, Vice-Chair Thielen and members of the Committees.

My name is Erik Kvam. I am the President of Renewable Energy Action Coalition of Hawaii (REACH), a trade association whose vision is a Hawaiian energy economy based 100% on renewable sources indigenous to Hawaii.

REACH is in **SUPPORT** of HB 2618.

Hawaii's renewable energy technologies tax credit applies only to intermittent solar and wind generation. It does not apply to energy storage or any forms of dispatchable renewable generation.

Without large amounts of energy storage, the large amounts of intermittent solar and wind generation that have been and will be added to the Hawaiian island grids will be undispatchable and unusable when imported fuels stop flowing to Hawaii.

REACH **SUPPORTS** HB 2618 – creating an energy storage tax credit that complements the existing renewable energy technologies tax credit -- to encourage development of the dispatchable renewable generation that Hawaii needs when imported fuels stop flowing to Hawaii.

Thank you for allowing me to testify.

Statement of
Shawn Bailey
Regulatory and Market Analysis Manager
Sempra US Gas and Power
before the

HOUSE COMMITTEE ON
ENERGY AND ENVIRONMENTAL PROTECTION

4, day, February, 2014
8:30 a.m.
State Capitol, Conference Room 325 In consideration of

BILL RELATING TO
Chair Representative Lee , Vice Chair Thielen, and Members of the Committee on ENERGY AND ENVIRONMENTAL PROTECTION

Sempra USG **Supports** HB2618 Relating to Energy Storage.

Sempra USGP's fleet includes over 2000 MW of wind, solar and natural gas fueled generation. Sempra USGP's Auwahi wind project on Maui includes 21MW of wind generation in combination with 11MW and 4.4MWh of battery storage capacity.

There are a number of factors that make the Hawaii's consideration of energy storage particularly timely. First, storage is uniquely capable of dealing with generation variability associated with the current significant intermittent renewable penetration in the state, and the increasing renewable procurement goals. For example, since storage acts as both generation capacity and load, it can help accommodate periods of over-generation and generation variability by the renewable fleet. In addition, increasing distributed generation on the system, including rooftop solar, makes maintaining the balance between demand and supply more challenging, and can result in less efficient operation for some of the flexible thermal generators on the system.

Other states with similar renewable goals are moving aggressively to procure storage as a means to maximize the benefit of prior and future renewable procurement, and address the need for more flexible generation. California Public Utility Commission has established a 50MW storage procurement mandate to meet local reliability needs in the Los Angeles area in the near term, and a mandate to reach 1325MW of storage procurement by the three investor-owned utilities by 2020. In addition, New York has committed $23mm in funding for storage development, and the Canadian province of

Ontario also plans to procure 50MW of storage capacity as an initial goal.

Sempra USGP supports a near term storage procurement goal to address current needs, and ongoing efforts by HECO and the Public Utilities Commission to establish a storage procurement plan to reach future incremental storage targets, as a prudent course of action and the incorporation of tax credit provisions that enhance the cost effectiveness of storage installations.

ROYAL CONTRACTING COMPANY'S
TESTIMONY IN SUPPORT OF HB 2618

HOUSE COMMITTEE ON ENERGY AND ENVIRONMENTAL PROTECTION

Good afternoon Chair Lee, Vice Chair Thielen, and members of the Committee:

Royal Contracting Co. supports HB2618 and respectfully requests that the Committee pass it out.

Royal Contracting was established in 1961, and has been constructing projects in Hawaii for the past 51 years. We are a general engineering, and site work contractor that has successfully completed projects on all of the major islands, including Molokai.

We are currently considering a role in the Ikehu Molokai project being developed by Princeton Energy Group for the benefit of the residents and businesses on Molokai. This is the project described in HB2816 as the "multi-megawatt renewable energy project with energy storage technology near Kaunakakai to exclusively serve the island of Molokai". The island of Molokai suffers from very high electric rates, a grid that is unstable electrically, and a large carbon footprint. The Ikehu Molokai project aims to solve these problems by converting the island's electric system to 100% renewable energy. This is an exciting project for us and one of which the island and the state will be very proud.

HB2816 is vitally important to the success of the Ikehu Molokai project. The high degree of renewable penetration called for by the project requires a large capital expense, including a robust energy storage component. The capital expense for the Ikehu Molokai project is quite high on a $/MW basis. The high capital expense can be ameliorated with the benefit of long-term financing at reasonable interest rates, which the SPRBs authorized by HB 2816 will provide.

Therefore, some form of financial incentive is vitally important to the success of renewable penetration in Hawaii. We respectfully request that this measure be passed out.

Thank you for the opportunity to submit our written testimony.

Sincerely,

Roland Au

Roland Au

Project Engineer

Royal Contracting Company, Ltd.

3 February 2014

Sunrun Inc. | 1.855.4SUNRUN | sunrunhome.com

HOUSE COMMITTEE ON ENERGY & ENVIRONMENTAL PROTECTION

Tuesday, February 4, 2014

TESTIMONY IN SUPPORT OF HB 2618 RELATING TO ENERGY STORAGE
Sarah Bertram, Director, Public Policy, Sunrun

Chair Lee, Vice Chair Thielen, and Members of the Committee:

Thank you for the opportunity to provide testimony in support of HB 2618.

Sunrun is a leading residential solar company with a national reach. Sunrun has been serving customers in Hawaii since 2010 by partnering with local solar installers. To date, Sunrun has invested more than $140M to support approximately 4,000 homeowners across the islands in adopting rooftop solar.

Hawaii residents strongly support rooftop solar. A September 2013 poll conducted by Tulchin research (N=600) shows that 96% of registered voters surveyed support or strongly support solar. Further, 90% of respondents agreed with the statement (including 67% who strongly agree) that "*we should allow and encourage as many people as we can to install solar power in their homes and businesses to advance the state's clean energy goals*." The legislature in Hawaii has a strong history of supporting policies, such as HB 2618, that seek to achieve this objective.

HB 2618 recognizes that energy storage will play an important role in Hawaii's clean energy transformation and economy by facilitating more distributed solar power.

Energy storage is poised to follow a similar trajectory that rooftop solar has experienced Hawaii; in the four years that Sunrun has been investing in rooftop solar in Hawaii, installed costs have declined by 25%. Similarly, through scale, energy storage costs should decline and allow the technology to become more mainstream.

Sunrun supports the approach of HB 2618 to build on the Hawaii state tax credit policy that has supported rooftop solar in recent years to now spur energy storage deployment.

Thank you for the opportunity to provide this testimony.

Sincerely,
Sarah Bertram

TESTIMONY OF WARREN BOLLMEIER ON BEHALF OF THE
HAWAII RENEWABLE ENERGY ALLIANCE BEFORE THE
HOUSE COMMITTEE ON ENERGY AND ENVIONMENTAL PROTECTION

HB 2618, RELATING TO ENERGY STORAGE

February 4, 2014

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

The purpose of HB 2618 is to facilitate the use of renewable energy by encouraging the use of grid-connected energy storage technologies and systems through a tax credit, limited in scope and duration, for grid-connected energy storage properties. The tax credit may be claimed as an investment tax credit or utilization tax credit.

HREA **supports** this measure and offers the following comments and recommendations:

1) Comments. This measure supports our clean energy goals as we will need storage to facilitate the integration of renewables and energy efficiency on our island grids. With respect to the provisions of this measure:

   a) We do not have any recommendations at this time for "filling in the blanks," i.e., how many cents/kWh.

   b) The measure offers two options for payment: investment tax credit (the credit would be taken upon installation) and utilization tax credit (the credit would be paid out over a 10 year period). If there is concern about fiscal impact, the utilization tax credit might be preferred as the annual fiscal impacts would be spread out over 10 years.

2) Recommendations: We recommend the committee pass this measure out.

Mahalo for this opportunity to testify.

46-040 Konane Place #3816, Kaneohe HI 96744 • www.http://hawaiirenewableenergy.org • p: 808.247.7753 • wsb@lava.net

HOUSE COMMITTEE ON ENERGY & ENVIRONMENTAL PROTECTION
Tuesday, February 4, 2014 – 8:30 a.m. – Room 325

Ulupono Initiative Strongly <u>Supports</u> HB 2618, Relating to Energy Storage

Dear Chair Lee, Vice Chair Thielen, and Members of the Committee:

My name is Murray Clay and I am managing partner of the Ulupono Initiative, a Hawai'i-based impact investment firm that strives to improve the quality of life for the people of Hawai'i by working toward solutions that create more locally grown food, increase renewable energy, and reduce/recycle waste. Ulupono invests in projects that have the potential to create large-scale, innovative change.

Ulupono strongly <u>supports</u> HB 2618, which establishes an energy storage tax credit for grid-connected renewable energy projects. In recent years Hawai'i has seen significant growth in renewable energy adoption moving the State towards its renewable energy goals. However, over the last year in particular, interconnection of renewable energy systems has become increasingly problematic. The growth rate in new residential solar PV systems, for example, has begun to decline this year. The interconnection of utility-scale renewable energy systems is stretching over years. If the existing interconnection problems continue, renewable energy growth will stagnate in Hawai'i. A modern, flexible grid is necessary to maximize renewable energy penetration.

Energy storage is one of the primary means by which to increase grid flexibility and resilience. Circuits that are currently completely closed to additional renewable energy could effectively be opened up with sufficient storage in place. Furthermore, energy storage has the ability to decrease the curtailment of existing renewable energy – energy that is currently being wasted. A modest tax credit, as proposed by this bill, could be sufficient to push currently expensive storage technology into mainstream use in Hawai'i, thus opening the door to further renewable energy use and a reduction in expensive oil use. For these reasons we support HB 2618.

Although Ulupono Initiative supports all forms of renewable energy, we suggest that the committee might want to consider limiting the tax credit to utility-scale energy storage – for example, to one megawatt of power capacity or one megawatt hour of energy storage capacity. A focus on utility-scale storage may be a more economical and equitable approach to increasing grid flexibility because utility-scale storage benefits ratepayers broadly, whereas residential storage mainly benefits the individual homeowner,. With fewer projects to track, a utility-scale focused tax credit would also have the benefit of being relatively easy to administer.

We strongly believe that this bill has the potential to open the door for significant renewable energy growth in Hawai'i.

Thank you for this opportunity to testify.

Pacific Guardian Center, Mauka Tower
737 Bishop Street, Suite 2350, Honolulu, HI 96813

808 544 8960 o | 808 544 8961 f
www.ulupono.com

Respectfully,

Murray Clay
Managing Partner

Email: communications@ulupono.com

MOLOKA'I RANCH
Treasured heritage. Vibrant future.

TESTIMONY IN SUPPORT OF HB 2618
HOUSE COMMITTEE ON ENERGY & ENVIRONMENT PROTECTION

Tuesday, February 4, 2014 at 8:30am Conf. room 325

Testifier: Clay R. Rumbaoa – CEO, Molokai Properties Limited (dba Molokai Ranch)

Goodmorning & Aloha Chair Lee, Vice Chair Thielen and Committee Members

Molokai Ranch supports HB 2618. Like many Maui Electric Company (MECO) service areas, implementation of solar energy on Molokai has reached it's allowable limit.

Molokai has one of the highest electricity rates in Hawaii, ranging from $0.48 to $0.52 per kwh. This bill will allow storage technology to be designed & implemented, thus allowing MECO to accept more renewable energy, thus lowering our operating costs.

Molokai Ranch operations involve high demand of electricity. HB 2618 will result in rate relief, allowing Molokai Ranch to pass on cost savings to customers and possibly hire additional employees.

Therefore, we respectfully request that HB 2618 be passed out of committee.

Mahalo,

Clay R. Rumbaoa

Oahu
1003 Bishop Street • Suite 1170 • Honolulu, Hawaii 96813
Telephone 808.531.0158 • Facsimile 808.521.2279

Molokai
P.O. Box 259 • Maunaloa, Hawaii 96770
Telephone 808.552.2444 • Facsimile 808.552.2908

Date: 1/28/2014

My name is William Davis and I am a resident of Molokai. I have observed many solar panels on roof tops in Hawaii, and am very pleased that we are finally harnessing the power of the sun in a productive way. I know however, that to continue generating power from our abundant sunshine in Hawaii, we need to add batteries or energy storage. Energy storage is even more critical as we start generating solar power on a utility scale. Ikehu Molokai is an example of an innovative utility scale solar project. From what I understand, it cannot happen without significant amounts of energy storage. Just as the State of Hawaii facilitates the development of solar power with tax credits, it should do the same for energy storage technologies, since the two go hand-in-hand. I urge our legislators to support **SB2933 and the companion House Bill**, which treats energy storage as a significant component of and contributor to renewable power generation in Hawaii.

Name: William Davis

Address: P.O.Box 2093
Kekaha Hi,
96748

Date: 1-28-14

My name is Rex Kamakana and I am a resident of Molokai. I have observed many solar panels on roof tops in Hawaii, and am very pleased that we are finally harnessing the power of the sun in a productive way. I know however, that to continue generating power from our abundant sunshine in Hawaii, we need to add batteries or energy storage. Energy storage is even more critical as we start generating solar power on a utility scale. Ikehu Molokai is an example of an innovative utility scale solar project. From what I understand, it cannot happen without significant amounts of energy storage. Just as the State of Hawaii facilitates the development of solar power with tax credits, it should do the same for energy storage technologies, since the two go hand-in-hand. I urge our legislators to support **SB2933 and the companion House Bill**, which treats energy storage as a significant component of and contributor to renewable power generation in Hawaii.

Name: R K

Address: Po Box 640
Kilauea HI 96748

Date:

My name is Michael Kamakana and I am a resident of Molokai. I have observed many solar panels on roof tops in Hawaii, and am very pleased that we are finally harnessing the power of the sun in a productive way. I know however, that to continue generating power from our abundant sunshine in Hawaii, we need to add batteries or energy storage. Energy storage is even more critical as we start generating solar power on a utility scale. Ikehu Molokai is an example of an innovative utility scale solar project. From what I understand, it cannot happen without significant amounts of energy storage. Just as the State of Hawaii facilitates the development of solar power with tax credits, it should do the same for energy storage technologies, since the two go hand-in-hand. I urge our legislators to support **SB2933 and the companion House Bill**, which treats energy storage as a significant component of and contributor to renewable power generation in Hawaii.

Name: Michael Kamakana

Address: Box 163
Kaunakakai, Hi 96748

Date:

My name is Dennis Kamakana and I am a resident of Molokai. I have observed many solar panels on roof tops in Hawaii, and am very pleased that we are finally harnessing the power of the sun in a productive way. I know however, that to continue generating power from our abundant sunshine in Hawaii, we need to add batteries or energy storage. Energy storage is even more critical as we start generating solar power on a utility scale. Ikehu Molokai is an example of an innovative utility scale solar project. From what I understand, it cannot happen without significant amounts of energy storage. Just as the State of Hawaii facilitates the development of solar power with tax credits, it should do the same for energy storage technologies, since the two go hand-in-hand. I urge our legislators to support **SB2933 and the companion House Bill**, which treats energy storage as a significant component of and contributor to renewable power generation in Hawaii.

Name: Dennis Kamakana

Address: PO Box 163
Kaunakakai, Hi 96748

Date:

My name is Hawani Kamakana and I am a resident of Molokai. I have observed many solar panels on roof tops in Hawaii, and am very pleased that we are finally harnessing the power of the sun in a productive way. I know however, that to continue generating power from our abundant sunshine in Hawaii, we need to add batteries or energy storage. Energy storage is even more critical as we start generating solar power on a utility scale. Ikehu Molokai is an example of an innovative utility scale solar project. From what I understand, it cannot happen without significant amounts of energy storage. Just as the State of Hawaii facilitates the development of solar power with tax credits, it should do the same for energy storage technologies, since the two go hand-in-hand. I urge our legislators to support **SB2933 and the companion House Bill**, which treats energy storage as a significant component of and contributor to renewable power generation in Hawaii.

Name: Hawani Kamakana

Address: Box 163 Kaunakakai, Hi 96748

Date:

My name is MP Kamakana and I am a resident of Molokai. I have observed many solar panels on roof tops in Hawaii, and am very pleased that we are finally harnessing the power of the sun in a productive way. I know however, that to continue generating power from our abundant sunshine in Hawaii, we need to add batteries or energy storage. Energy storage is even more critical as we start generating solar power on a utility scale. Ikehu Molokai is an example of an innovative utility scale solar project. From what I understand, it cannot happen without significant amounts of energy storage. Just as the State of Hawaii facilitates the development of solar power with tax credits, it should do the same for energy storage technologies, since the two go hand-in-hand. I urge our legislators to support **SB2933 and the companion House Bill**, which treats energy storage as a significant component of and contributor to renewable power generation in Hawaii.

Name: [signature]

Address: Box 163
Kaunakakai, Hi 96748

Date: Jan. 28, 2014

My name is Elizabeth Kamakana and I am a resident of Molokai. I have observed many solar panels on roof tops in Hawaii, and am very pleased that we are finally harnessing the power of the sun in a productive way. I know however, that to continue generating power from our abundant sunshine in Hawaii, we need to add batteries or energy storage. Energy storage is even more critical as we start generating solar power on a utility scale. Ikehu Molokai is an example of an innovative utility scale solar project. From what I understand, it cannot happen without significant amounts of energy storage. Just as the State of Hawaii facilitates the development of solar power with tax credits, it should do the same for energy storage technologies, since the two go hand-in-hand. I urge our legislators to support **SB2933 and the companion House Bill**, which treats energy storage as a significant component of and contributor to renewable power generation in Hawaii.

Name: Elizabeth H. Kamakana

Address: P.O. Box 640
Kaunakakai, HI 96748

Date: 1-28-14

My name is Daniel K. Iaea Sr. and I am a resident of Molokai. I have observed many solar panels on roof tops in Hawaii, and am very pleased that we are finally harnessing the power of the sun in a productive way. I know however, that to continue generating power from our abundant sunshine in Hawaii, we need to add batteries or energy storage. Energy storage is even more critical as we start generating solar power on a utility scale. Ikehu Molokai is an example of an innovative utility scale solar project. From what I understand, it cannot happen without significant amounts of energy storage. Just as the State of Hawaii facilitates the development of solar power with tax credits, it should do the same for energy storage technologies, since the two go hand-in-hand. I urge our legislators to support **SB2933 and the companion House Bill**, which treats energy storage as a significant component of and contributor to renewable power generation in Hawaii.

Name: Daniel K. Iaea Sr.

Address: P.O. Box 640
Kaunakakai, HI 96748

Date: 1-28-14

My name is Louise Iaea and I am a resident of Molokai. I have observed many solar panels on roof tops in Hawaii, and am very pleased that we are finally harnessing the power of the sun in a productive way. I know however, that to continue generating power from our abundant sunshine in Hawaii, we need to add batteries or energy storage. Energy storage is even more critical as we start generating solar power on a utility scale. Ikehu Molokai is an example of an innovative utility scale solar project. From what I understand, it cannot happen without significant amounts of energy storage. Just as the State of Hawaii facilitates the development of solar power with tax credits, it should do the same for energy storage technologies, since the two go hand-in-hand. I urge our legislators to support **SB2933 and the companion House Bill**, which treats energy storage as a significant component of and contributor to renewable power generation in Hawaii.

Name: Louise L. Iaea

Address: P.O. Box 1204
Kaunakakai, HI 96748

Date:

My name is Clement Reyes Jr. and I am a resident of Molokai. I have observed many solar panels on roof tops in Hawaii, and am very pleased that we are finally harnessing the power of the sun in a productive way. I know however, that to continue generating power from our abundant sunshine in Hawaii, we need to add batteries or energy storage. Energy storage is even more critical as we start generating solar power on a utility scale. Ikehu Molokai is an example of an innovative utility scale solar project. From what I understand, it cannot happen without significant amounts of energy storage. Just as the State of Hawaii facilitates the development of solar power with tax credits, it should do the same for energy storage technologies, since the two go hand-in-hand. I urge our legislators to support **SB2933 and the companion House Bill**, which treats energy storage as a significant component of and contributor to renewable power generation in Hawaii.

Name: Clement Reyes Jr.

Address: P.O. Box 1996 Kaunakakai Hi 96748

TESTIMONY IN SUPPORT OF HB 2618

HOUSE COMMITTEE ON ENERGY AND ENVIRONMENTAL PROTECTION
Tuesday, February 4, 2014 at 8:30a.m.
Conference Room 325

To: Chair Lee, Vice Chair Thielen, and members of the Committee:

I support HB2618 and respectfully request that the Committee pass it.

I am a long-term land owner in Molokai. My husband and I bought land in Molokai, after falling in love with the natural beauty of the island, and hoping to retire there. I am also Director of Project Finance for the Princeton Energy Group, which is developing the proposed renewable energy project with energy storage technology (Ikehu Molokai). Princeton Energy Group has been developing innovative and challenging renewable energy projects since the 1990s.

Because of my day to day work, I stayed very interested in the development of the "Big Wind" project on Molokai. When Molokai Ranch decided not to lease its land to this project in February 2013, I went to Molokai almost immediately thereafter, to hear from as many residents as possible, what could be done on the island which would utilize the abundant renewable energy resources on the island, for the island's benefit. I also met with Molokai Ranch, the Maui Electric Company (Meco) and inspected possible project sites. It emerged that there is strong support on the island for solar power to power Molokai, and provided we can put in significant energy storage, Meco will be supportive.

Upon hearing my report, I was delighted that my CEO (Steve Taber) felt that taking on this challenging project in Molokai is in line with Princeton Energy Group's corporate mission and expertise, and that he will be willing to put in a lot of effort himself, to make the project happen. Steve and his Co-founder have indeed taken on many challenging projects, such as the first renewable energy project in Crete (an island grid) in Greece, in Turkey and in Mexico.

In developing Ikehu Molokai, a key challenge is the cost of energy storage. In order to be able to shift the day time generation from solar photovoltaic panels into night time use on Molokai, we will need a very large amount of energy storage capacity. We are looking at various energy storage technologies, ranging from pumped storage hydro, advanced flow batteries, solar thermal with molten salt storage, etc. They are capital intensive and expensive. However, advanced energy storage technologies are rapidly becoming fully operational, as witnessed at the first North American energy storage conference in San Jose (California) in September 2013. As utilities integrate more renewable energy resources, which are intermittent by nature, energy storage is becoming essential. The State of Hawaii can do its part, by enabling projects such as Ikehu Molokai, to integrate energy storage in renewable energy generation at a utility scale. Incentivizing energy storage will lead to significantly higher levels of renewable energy penetration in the State of Hawaii, as well as to a stable and reliable grid.

I respectfully request that this measure be passed out.

Thank you for the opportunity to testify.

Sincerely,

Kumiko Yoshinari, PhD, CFA

31 January 2014

From: Michael Mangana [mailto:michaelmangana@citlink.net]
Sent: Wednesday, January 29, 2014 8:50 PM
To: 'Rep. Lee and Senator Gabbard
Subject: SB2754/HB1942 and SB2933/HB2618

Aloha Representative Lee and Senator Gabbard,

As you all may know, the Hawaii Legislative session began a few weeks ago. On the agenda this year are two bills that will impact the Ikehu Molokai project, and could lower the cost of electricity for Molokai residents. Those are SB2754/HB1942 and SB2933/HB2618. The first sets aside Special Purpose Revenue Bonds (SPRBs) for the Ikehu project, bringing down the cost to finance its initial construction. The second is a bill that creates tax incentives for all energy storage projects in the State of Hawaii – a great companion to the many tax incentives for building renewable energy projects that do not have a storage component.

Both of these bills, if passed, will reduce the cost of generating electricity on Molokai for the Ikehu project. As stated by MECo, reduced generation costs will be passed on to the consumer. I support these bills and hope you will as well.

Mahalo for all your efforts to promote renewable energy and reduced electricity rates on Molokai.

Mike Mangana

P.O. BOX 1980

KAUNAKAKAI, MOLOKAI, HAWAII 96748

From: Michael Mangana [mailto:michaelmangana@citlink.net]
Sent: Wednesday, January 29, 2014 8:47 PM
To: 'senenglish@capitol.hawaii.gov'
Subject: SB2754/HB1942 and SB2933/HB2618.

Aloha Senator English,

As you all may know, the Hawaii Legislative session began a few weeks ago. On the agenda this year are two bills that will impact the Ikehu Molokai project, and could lower the cost of electricity for Molokai residents. Those are SB2754/HB1942 and SB2933/HB2618. The first sets aside Special Purpose Revenue Bonds (SPRBs) for the Ikehu project, bringing down the cost to finance its initial construction. The second is a bill that creates tax incentives for all energy storage projects in the State of Hawaii – a great companion to the many tax incentives for building renewable energy projects that do not have a storage component.

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Mahalo for all your efforts to promote renewable energy and reduced electricity rates on Molokai.

Mike Mangana

P.O. BOX 1980

KAUNAKAKAI, MOLOKAI, HAWAII 96748

HB2618
Submitted on: 1/30/2014
Testimony for EEP on Feb 4, 2014 08:30AM in Conference Room 325

Submitted By	Organization	Testifier Position	Present at Hearing
Ed Wagner	Individual	Oppose	No

Comments: Members of the EEP Committee, I can not support this bill unless it is modified to specify on-grid OR off-grid energy storage. Some residents want nothing to do with the grid, prefer to use it with a switch for grid-tied emergency use only, or use a generator for emergency backup with their energy storage solution such as batteries and have no connection to HECO's dilapidated, crumbling grid whatsoever.

Please note that testimony submitted less than 24 hours prior to the hearing, improperly identified, or directed to the incorrect office, may not be posted online or distributed to the committee prior to the convening of the public hearing.

Do not reply to this email. This inbox is not monitored. For assistance please email webmaster@capitol.hawaii.gov

HB2618
Submitted on: 1/30/2014
Testimony for EEP on Feb 4, 2014 08:30AM in Conference Room 325

Submitted By	Organization	Testifier Position	Present at Hearing
Charles Prentiss	Individual	Comments Only	No

Comments: This is a good bill. However, you need to add in the provision that is currently in statute that individuals without income tax liability (e.g. seniors) can take the income tax credit as refundable.

Please note that testimony submitted less than 24 hours prior to the hearing, improperly identified, or directed to the incorrect office, may not be posted online or distributed to the committee prior to the convening of the public hearing.

Do not reply to this email. This inbox is not monitored. For assistance please email webmaster@capitol.hawaii.gov

TESTIMONY IN SUPPORT OF HB 2618

HOUSE COMMITTEE ON ENERGY AND ENVIRONMENTAL PROTECTION
Tuesday, February 4, 2014 at 8:30a.m.
Conference Room 325

To: Chair Lee, Vice Chair Thielen, and members of the Committee:

I support HB2618 and respectfully request that the Committee pass it.

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I respectfully request that this measure be passed out.

Thank you for the opportunity to testify.

Sincerely,

Kumiko Yoshinari, PhD, CFA

31 January 2014



LATE

TEE ON ENERGY & ENVIRONMENTAL PROTECTION
February 4, 2013, 8:30 A.M.
Room 325
(Testimony is 4 pages long)

TESTIMONY IN STRONG SUPPORT OF HB 2618, SUGGESTED AMENDMENTS

Chair Lee and members of the Energy & Environmental Protection Committee:

The Blue Planet Foundation strongly supports HB 2618, to facilitate and encourage the use of renewable energy by incentivizing the use of grid-connected energy storage technologies and systems through a tax credit (that is limited in scope and duration) for grid-connected energy storage. The proposed investment tax credit or utilization tax credit are intended to promote the use of grid-connected energy storage to address the varying needs of our island electric grids with technologies most applicable to those needs. Energy storage tax incentives are the appropriate and needed tool to enable continued momentum toward Hawaii's independence from fossil fuels.

Energy storage—whether it be batteries, ultra-capacitors, or some other technology—will be an integral part of our island electricity systems. These technologies are evolving rapidly and in the technology development and deployment stage where tax credits could make a critical difference in adoption rates.

Blue Planet believes HB 2618 is a timely and appropriate policy for the following reasons.

Incentives for energy storage will hasten development of a smart grid, increasing reliability and lowering costs to ratepayers

House Bill 2618 is intended to support variable energy sources, including wind and solar power, while moderating energy demands during peak hours and facilitating a "smart grid" that is more reliable in order to improve Hawaii's island electricity grids and achieve the state's clean energy future. This measure would help improve the efficiency, versatility and reliability of Hawaii's

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55 Merchant Street 17th Floor • Honolulu, Hawai'I 96813 • 808-954-6142 • blueplanetfoundation.org

electric grids, and would offer more affordable energy storage technologies for homes and businesses.

Hawaii's electricity grid needs energy storage to achieve the state's aggressive clean energy goals. To take advantage of distributed and diversified energy like solar and wind and other variable sources of power, the grid has to become smarter and have the capacity to store electricity. It will resemble today's Internet—where distributed servers both send and receive packets of information—and less like yesterday's commercial television. Such a self-aware, robust smart grid will instantaneously adjust to shifts in wind strength or cloud cover over solar, balancing energy loads on the other side of the wire and drawing on stored energy when needed.

Energy storage is a critically important tool for reliable system operation of a grid with substantial amounts of intermittent renewable generation. Storage can smooth out variable generation, and it can bank excess renewable energy for use during peak demand. Energy Storage helps to maximize the use of indigenous renewable energy and strengthen Hawaii's economy. It will accommodate expected increasing proportions of variable and/or intermittent renewable generation resources in the near future.

A 2013 study[1] conducted by Hawaiian Electric Companies on battery storage on the MECO system demonstrates showed that a 15 MWh battery storage resource effectively reduced the amount of curtailed renewable energy by almost 2 GWh (i.e., equivalent to 2000 MWh) per year. By reducing curtailment, the amount of renewable energy increased and resulted in a corresponding increase in the ability to meet the Renewable Portfolio Standards percentage.

The time is ripe for implementation of existing energy storage strategies and technology

Currently, a variety of energy storage strategies are available with existing technology: battery technologies, hydrogen and other alternative fuels, and pumped hydroelectric storage. On Maui, large amounts of wind power are frequently being curtailed in favor of fossil generation. Retiring fossil fuel units and developing innovative energy storage is needed to help eliminate this wasteful practice. Evolving technologies continue to enable more renewable energy. As the prices for renewable sources of energy continue to decrease, energy storage will result in higher capacity factors and less curtailment of renewable resources. This increases availability and optimal use of system operation methods.

[1] Hawaiian Electric Companies 2013 Integrated Resource Planning ("IRP") Report and Action Plan

With increased energy storage, the existing grid will be transformed into a “smarter”, more efficient, more reliable grid that integrates more renewable energy through the use of various technologies and capabilities and provide more information and options to customers with the overall goal of reducing costs and improving customer service. This clean energy transformation will help to stabilize and strengthen Hawaii's economy by reducing its dependency on imported fuels and will help protect Hawaii's environment by greatly reducing greenhouse gas emissions.

Hawaii’s economy needs power that’s as dependable as the sunrise. To make full use of all of Hawaii’s native energy sources we need the ability to store power for times when the sun isn’t shining or the wind isn’t blowing. While it’s not clear what form will be most cost effective—fuel cells, pumped water, flywheels, ultra capacitors, batteries, dilithium crystals—we do know that the technology is evolving rapidly. Consider data storage for computers. In the late 1950s, cutting-edge data storage could store the equivalent of one MP3 file in the space of half a carport. Today, over 12,000 such files fit on a keychain flash drive. We are seeing a similar evolution for power storage, with the cost of battery storage dropping at nearly 8% annually.

Stored energy can serve as an emergency backup to maintain grid reliability

Currently, such backup is typically in the form of "spinning reserves," or fossil fuel plants that are kept running even when the energy is not needed. Meanwhile, battery technology is already being used with a number of renewable energy projects in Hawai'i, including wind farms on Maui and solar installations on Kaua'i and the Big Island.

SUGGESTED AMENDMENTS

Blue Planet recommends that the energy storage tax credit be amended with credit values as follows:

> (1) An investment credit equal to:
> (A) For a grid-connected energy storage property first placed in service on or before December 31, 2020, not more than **20 per cent** of the basis; or
> (B) For a grid-connected energy storage property first placed in service after December 31, 2020, and on or before December 31, 2025, not more than **10 per cent** of the basis; or
> (2) A utilization credit equal to:

(A) For a grid-connected energy storage property first placed in service on or before December 31, 2020, **7 cents** per kilowatt-hour of energy storage capacity; or
(B) For a grid-connected energy storage property first placed in service after December 31, 2020, and on or before December 31, 2025, **3.5 cents** per kilowatt-hour of energy storage capacity.

Expanding Hawaii's energy storage capacity will improve the efficiency, flexibility, and reliability of our electric grid, allowing us to wring the most power out of it, while adding large amounts of new renewable energy resources like wind and solar.

Please forward HB 2618.

Thank you for the opportunity to testify.

LATE

2/4/2014	**House Committee on Energy and Environmental Protection**	**EEP**
8:30 a.m.	**TESTIMONY IN SUPPORT**	**HB 2618**

Chair Lee, Vice Chair Thielen, and Members of the Committee:

Hawaii PV Coalition is pleased to submit testimony in support of HB 2618, which establishes a tax credit for clean energy storage systems in Hawaii.

In order for Hawaii to take full advantage of its renewable energy resources, and for Hawaii to meet its ambitious clean energy goals, Hawaii will need to develop greater energy storage capacity in its electric system. Storage options will need to be developed at both the grid level and at the individual homeowner level. In short, energy storage will be an important part of the more modern and renewable-friendly utility infrastructure that we need for the 21st century. A tax credit for energy storage will allow early investment in and adoption of these technologies that might not otherwise be possible.

Hawaii PV Coalition supports HB 2618 because it will facilitate the adoption and use of energy storage, which will allow Hawaii to more fully take advantage of solar energy and other renewable energy resources.

Sincerely,

Mark Duda
President, Hawaii PV Coalition

The Hawaii PV Coalition was formed in 2005 to support the greater use and more rapid diffusion of solar electric applications across the state. Working with business owners, homeowners and local and national stakeholders in the PV industry, the Coalition has been active during the state legislative sessions supporting pro-PV and renewable energy bills and helping inform elected representatives about the benefits of Hawaii-based solar electric applications.

PO Box 81501 | Haiku, HI 96708 | 808.579.8288 | 808.575.9878 (f) | info@hawaiipvcoalition.org | hawaiipvcoalition.org

SUNPOWER

LATE

HOUSE COMMITTEE ON ENERGY AND ENVIRONMENTAL F
Tuesday, February 4, 2014 — 8:30 a.m. — Room

Testimony in Support HB 2618, Relating to the Energy Storage Tax Credit

Chair Lee, Vice Chair Thielen, and Members of the Committee:

Introduction: My name is Riley Saito Senior Manager, Hawaii Projects, for SunPower Systems Corporation. SunPower is a dedicated supporter for over 15 years, in Hawaii, as an active participant of the renewable energy initiatives. Including Member (charter) of Hawaii Energy Policy Forum; Hawaii Clean Energy Initiative-Steering Committee and Energy Generation Working Group; Participant in energy related PUC dockets.

Thank you for the opportunity to provide **testimony in support of HB 2618**

The public's demand for renewable energy generations solar PV in Hawaii is extraordinarily strong. This is largely because Hawaii continues to have electricity rates that are more than 3 times the national average. Along with energy conservation, "going solar" is a way for Hawaii ratepayers to get some relief from sky-high cost of electricity. It also allows Hawaii to meet its clean energy goals and help reduce the state's dependence on imported fossil fuels.

Unfortunately, many ratepayers are now being prevented from installing photovoltaic solar systems as a result of Hawaiian Electric's interconnection policies. These interconnection policies are in turn the result of aging utility infrastructure designed to support fossil-fuel generation rather than renewable energy.

HB 2618 will help solve this problem by initiating a energy storage tax credit. With utilization of storage, Hawaiian Electric will be able to deliver more stable power, with a higher renewable content to its customers, while at the same time allowing more Hawaii residents to install photovoltaic solar systems. Energy Storage will also allow solar installations to proceed more quickly and without requiring ratepayers to pay for elaborate studies or costly grid upgrades. Equally important is the overarching foundation that transforms and modernizes our grid enabling, Hawaiian Electric to maintain safety and reliability as decentralized generation (at any circuit level), moves forward in Hawaii.

For these reasons, we **support** HB 2618 and urge you to pass it. Thank you for the opportunity to provide this testimony.

Riley Saito
Senior Manager, Hawaii Projects
SunPower Systems, Corporation

LATE

Solar Power Systems International

TESTIMONY OF JOHN CROUCH ON BEHALF OF SPSI, A RENEWABLE ENERGY COMPANY BASED IN HAWAII, BEFORE THE HOUSE COMMITTEE ON ENERGY AND ENVIRIONMENTAL PROTECTION

HB 2618, RELATING TO ENERGY STORAGE

February 4, 2014

Chair Lee, Vice Chair Thielen and distinguished members of the Committee, my name is John Crouch. I and my two local partners have been involved in the design and installation of renewable energy projects in Hawaii since the first commercial system at Mauna Lani Bay Hotel and Bungalows in 1998. We are very supportive of measures that contribute to the full utilization of the renewable energy resources available in our island communities.

SPSI **SUPPORTS THIS MEASURE** and offers the following comments:

1) Use of storage to help manage renewable energy production is one of the most important measures of energy management available to us as we move to the elimination of the use of fossil fuels for generation of electricity and fuel for automobiles.

2) We see this measure as the key to increased use of renewables in grid-connected applications. This will help our utilities manage the rapid increase in penetration of renewable energy into the grid network.

3) We request that the committee pass this measure out.

Mahalo for the opportunity to testify.

Solar Power Systems International, LLC – P.O.Box 38-4299 – Waikoloa, Hi. 96738 John@spsintl.net