

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

FEBRUARY 10, 2014
2:45 p.m.

MEASURE: H.B. No. 2618, H.D. 1
TITLE: Relating to Energy Storage

Chair McKelvey and Members of the Committee:

DESCRIPTION:

This measure would establish an income tax credit for tax payers who install and place into service after December 31, 2014 and before December 31, 2025 a “grid-connected energy storage property” with a capacity of at least one megawatt-hour. The amounts for both the investment and utilization tax credit options are currently unspecified. A taxpayer may elect to take a refundable credit at a reduced rate.

POSITION:

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

COMMENTS:

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 energy efficiency options, but it should be recognized that energy storage is not a panacea.

A variety of technologies have been found to be cost-effective in Hawaii, when used in the right application, to meet objectives including improved reliability and power quality, greater utilization of renewable energy, and management of demand.

The Commission cautions the Legislature in selecting one approach to incentivize over others. Each kind of technology or program has the potential to address a different combination of objectives and concerns under different conditions or in different locations. Artificially lowering the apparent cost of one technology has the potential to introduce market distortions, whereas a desired approach is to establish a competitive market structure where possible.

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

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Statement of
Richard C. Lim
Director
Department of Business, Economic Development, and Tourism
before the
HOUSE COMMITTEE ON CONSUMER PROTECTION AND COMMERCE

Monday, February 10, 2014
2:45 p.m.
State Capitol, Conference Room 325

in consideration of
HB 2618 HD1
RELATING TO ENERGY STORAGE.

Chair McKelvey, Vice Chair Kawakami, and Members of the Committee.

The Department of Business, Economic Development and Tourism (DBEDT) respectfully offers comments on HB 2618 HD1, 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
HONOLULU, HAWAII 96809
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To: The Honorable Angus L.K. McKelvey, Chair
and Members of the House Committee on Consumer Protection & Commerce

Date: Monday, February 10, 2014
Time: 2:45 p.m.
Place: Conference Room 325, State Capitol

From: Frederick D. Pablo, Director
Department of Taxation

Re: H.B. No. 2618, H.D.1, Relating to Energy Storage

The Department of Taxation (Department) appreciates the intent of H.B. 2618, H.D.1, 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 (DBEDT), 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.

Finally, the Department suggests that subsection (e), which requires DBEDT certification, be clarified in terms of the timing and procedure for the certification process. Taxpayers often have taxable years which do not coincide with the calendar year; therefore, the Department suggests that taxpayers be required start the certification a minimum 90 days or more prior to their needing the certification.

Thank you for the opportunity to provide comments.

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, HD-1

INTRODUCED BY: House Committee on Energy and Environmental Protection

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 and shall not be available for tax years beginning after December 31, 2025. 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 to 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 2/8/14



HOUSE COMMITTEE ON CONSUMER PROTECTION & COMMERCE
Monday, February 10, 2014 – 2:45 p.m. – Room 325

Ulupono Initiative Strongly Supports HB 2618 HD 1, 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 supports HB 2618 HD 1, 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 HD 1.

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.

Respectfully,

Murray Clay
Managing Partner

Email: communications@ulupono.com



PRINCETON ENERGY GROUP

Innovation in Renewable Energy

STEVE TABER
Chairman and CEO

PRINCETON ENERGY GROUP'S TESTIMONY IN SUPPORT OF HB 2618, HD1

HOUSE COMMITTEE ON CONSUMER PROTECTION & COMMERCE
Monday, February 10, 2014 at 2:45p.m.
Conference Room 325

Good afternoon Chair McKelvey, Vice Chair Kawakami, and members of the Committee:

Princeton Energy Group ("Princeton") supports HB2618, HD1 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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expensive; on the Ikehū Molokai project, for example, the cost of adding this storage will more than double the overall cost of the project.

To illustrate this contrast, below is a simplified analysis of 10 MW renewable projects, one on a large island grid and the other on a small island grid. (The latter is representative of Molokai.) The large island project has a small storage capability, intended for smoothing; the small island project has a large storage capability for shifting the generation into the high-need evening hours. Note that the large island project has a healthy return on investment of 11.23%, even at a PPA price of \$120/MWh. The small island project has a sub-market return of 5.62%, even with a higher PPA price of \$200/MWh.

	<u>Smoothing/large island</u>	<u>Generation shifting (small island)</u>		
generation capacity (KW)	10,000	10,000		
generation capital cost (\$)	20,000,000	20,000,000		
storage cost (\$)	1,000,000	41,000,000		
total capital cost (\$)	21,000,000	61,000,000		
energy generated (MWh/yr)	20,148	20,148		
energy delivered (MWh/yr)		Daytime	nighttime	total
Gross	20,148	5,037	15,111	20,148
less storage losses	(504)	0	(3,022)	(3,022)
net energy delivered	19,644	5,037	12,089	17,126
revenue (\$/MWh)	120	200	200	
revenue (\$)	2,357,316	1,007,400	2,417,760	3,425,160
unleveraged return on investment	11.23%			5.62%

Therefore, some form of financial incentive is vitally important to the success of the Ikehū Molokai project.

The economic impact of the tax credit bill to enable energy storage investments in Hawaii will be strongly positive. In the numerical illustration above, we assume a small island generation-shifting energy storage to cost \$41 million. The tax credit will amount to 20%, or approximately \$8 million. On a small island, such as Molokai, the renewable energy project with this type of energy storage can lead to reduction in electricity rates for the residents of 5 to 8 cents per kWh. Over the 20 year life of the energy storage equipment, this will result in savings to the residents of at least \$20 million. In addition, over the same period, the renewable energy/energy storage project will create at least 200 person-years of jobs on the island, representing at least \$10,000,000 in direct economic activity and about 3 times that much, or \$30,000,000, in indirect economic activity. Furthermore, in the case of Molokai, the reduced electricity costs will make water more affordable for homesteaders and Molokai businesses more cost-efficient, which will also stimulate economic activity.

Therefore, we respectfully request that this measure be passed out.

Thank you for the opportunity to testify.

Sincerely,

Princeton Energy Group

Steve Taber
Chairman & CEO

Princeton Energy Group is a company of renewable energy veterans deploying renewable energy projects and technologies around the world. The mission of the Princeton Energy Group is to expand the reach of renewable energy and energy efficiency in the marketplace through innovation in technology, business models, and financing techniques. We bring to every task exceptionally qualified individuals, skilled in finding unique resource and business solutions to difficult problems. The founders of Princeton have been at the forefront of the renewable energy industry since its early days in the 1970s in California. In addition to our for-profit activities through Princeton Energy Group, we have held influential positions in state and federal government and have served in the non-profit sector.

8 February 2014

TESTIMONY IN SUPPORT OF HB 2618, HD1

HOUSE COMMITTEE ON CONSUMER PROTECTION & COMMERCE

Monday, February 10, 2014 at 2:45p.m.

Conference Room 325

To: Chair McKelvey, Vice Chair Kawakami, and members of the Committee:

I support HB2618, HD1 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

8 February 2014

kawakami3-Benigno

From: mailinglist@capitol.hawaii.gov
Sent: Saturday, February 08, 2014 12:19 PM
To: CPCtestimony
Cc: mendezj@hawaii.edu
Subject: *Submitted testimony for HB2618 on Feb 10, 2014 14:45PM*

HB2618

Submitted on: 2/8/2014

Testimony for CPC on Feb 10, 2014 14:45PM in Conference Room 325

Submitted By	Organization	Testifier Position	Present at Hearing
Javier Mendez-Alvarez	Individual	Support	No

Comments:

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.

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LATE

HOUSE COMMITTEE ON CONSUMER PROTECTION & COMMERCE

February 10, 2014, 2:45 P.M.

Room 325

(Testimony is 4 pages long)

TESTIMONY IN STRONG SUPPORT OF HB 2618 HD1, SUGGESTED AMENDMENTS

Aloha Chair McKelvey and Consumer Protection & Commerce Committee members:

The Blue Planet Foundation strongly supports HB 2618 HD1, 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 HD1 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 HD1 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 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 study¹ 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 reduce the cost of electricity and the amount of fossil fuel use.

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 respectfully requests that HB 2618 HD1 be amended to delete the requirement that only storage devices of one megawatt-hour and larger qualify for the tax credit. We believe energy storage devices of all sizes can provide value to strengthening our electricity grid and reducing variability of renewable energy resources. Therefore we request that page 5, lines 11 – 12, be amended as follows:

centralized or distributed manner, [~~have a capacity of at least one megawatt-hour,~~] are certified by the department of business,

We further recommend 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 HD1.

Thank you for the opportunity to testify.



2/10/2014

House Committee on
Consumer Protection and Commerce

CPC

2:45 p.m.

TESTIMONY IN SUPPORT

HB 2618

Chair McKelvey, Vice Chair Kawakami, and Members of the Committee:

Hawaii PV Coalition is pleased to submit testimony in support of HB 2618, HD1, 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, HD 1 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.



Directors

Jody Allione
Silver Ridge

Joe Boivin
Hawaii Gas

Kelly King
Pacific Biodiesel

Warren S. Bollmeier II
WSB-Hawaii

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

HB 2618 HD1, RELATING TO ENERGY STORAGE

February 10, 2014

Chair McElvey, Vice-Chair Kawakami 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 HD1 is to establish 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 December 31, 2014; provided that this tax credit shall not be available for taxable years beginning after December 31, 2025. The tax credit may be claimed as either an investment credit or utilization credit.

HREA **supports** this measure with 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.