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STATE OF HAWAII
DEPARTMENT OF TAXATION
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MARIA E. ZIELINSKI
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JOSEPH K. KIM
DEPUTY DIRECTOR

To: The Honorable Chris Lee, Chair
and Members of the House Committee on Energy and Environmental Protection

Date: February 4, 2016
Time: 8:00 A.M.
Place: Conference Room 325, State Capitol

From: Maria E. Zielinski, Director
Department of Taxation

Re: H.B. 2511, Relating to Energy Storage.

The Department of Taxation (Department) appreciates the intent of H.B. 2511, and offers the following comments for your consideration.

H.B. 2511 creates a new income tax credit for energy storage property based either on the basis of the property, or on the amount of energy stored by the property and delivered and sold to a customer during the first ten taxable years that the energy storage property is in service. The credit based on the basis of the property is refundable if the taxpayer elects to reduce the credit amount by thirty percent. The credit based on the property's energy production is refundable without reduction in amount. H.B. 2511 additionally requires a report to the legislature from the Department, together with the Department of Business, Economic Development, and Tourism. The measure is effective on July 1, 2016, and applies to taxable years beginning after December 31, 2015.

First, the Department notes that this measure is effective for taxable years beginning after December 31, 2015. For an entirely new tax credit, the Department requests that this effective date be extended to taxable years beginning after December 31, 2016 in order to make the necessary form and computer system changes.

Second, the language used in the production credit in paragraph (a)(2) should be clarified. The Department suggests the phrase "for such electricity" be deleted from Subparagraphs (A), (B), and (C).

Third, the Department is concerned with the inconsistent use of the term "energy storage property." "Energy storage property" is defined as a class of property, but the bill also refers to "each energy storage property." This is inconsistent with the definition of "energy storage property" and limits the effect of defining "energy storage property" as a class of property. "Each

energy storage property” suggests that taxpayers may claim the credit for separate properties in a tax year, whereas the definition of “energy storage property” includes the cumulative basis of all property placed in service during the year. Although the per “system” issue that exists in section 235-12.5, Hawaii Revised Statutes, for calculating the credit does not exist in this measure, the per “energy storage property” issue does exist in terms of the refundability election in subsection (e).

Fourth, as a general matter, the Department notes that non-refundable tax credits are much less problematic to administer and promote compliance. The Department therefore recommends that both credits be made non-refundable.

Fifth, subsection (f) contains a clause stating “No property placed in service pursuant to subsection (a)(2) shall be subject to reduction in refund payments for any subsequent year by any legislative act or executive decision.” The Department is unsure as to the legal effect of this clause, and defers to the Department of the Attorney General for a more thorough analysis of this section.

Finally, subsection (j) requires a report to the legislature. Paragraph (3) requires a report on the estimated economic benefit that may be attributable to the new tax credit. The Department defers to the Department of Business, Economic Development, and Tourism regarding its ability to generate the information required by this Paragraph, the Department is not able to generate dynamic economic estimates.

Thank you for the opportunity to provide comments.



**DEPARTMENT OF BUSINESS,
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DAVID Y. IGE
GOVERNOR

LUIS P. SALAVERIA
DIRECTOR

MARY ALICE EVANS
DEPUTY DIRECTOR

Statement of
LUIS P. SALAVERIA
Director
Department of Business, Economic Development, and Tourism
before the
HOUSE COMMITTEE ON ENERGY & ENVIRONMENTAL PROTECTION

Thursday, February 4, 2016
8:00a.m.
State Capitol, Conference Room 325
in consideration of

HB 2511
RELATING TO ENERGY STORAGE.

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

The Department of Business, Economic Development & Tourism (DBEDT) offers comments on HB2511, which, among other provisions, creates storage property and production tax credits whereby a taxpayer can only take one or the other, and requires DBEDT to conduct a cost-benefit analysis and provide recommendations to the Legislature on the tax credit.

Given the limited State budgetary resources and without further understanding the relative impact on the expansion of renewable energy resources from storage adoption, we are concerned about the unknown expansion of the aggregate storage tax credit provided by this bill.

This bill appears to be silent on whether or not the storage properties must be grid-connected in order to receive the tax credit. We are concerned that providing incentives for independent, non-grid-connected energy storage would not be in the best interest of the State as it would not support overall grid modernization efforts.

Regarding the production tax credit, we note that further clarity with regards to the amount of energy that is *stored* by the energy storage property and *delivered* and *sold* to a customer for such electricity may be difficult to prove and implement in practice.

DBEDT also notes that the financial and human resources required to administer the duties of this bill are not fully addressed in its current budget. Should this measure advance, we

prefer the online survey approach taken in Act 270 (13) for the Research Activities Tax Credit for the monitoring and data collection component.

Finally, we defer to the Department of Budget and Finance on the impact of the State budget from this bill and the Department of Taxation on its ability to administer its duties under this bill.

Thank you for the opportunity to offer these comments.

TAX FOUNDATION OF HAWAII

126 Queen Street, Suite 304

Honolulu, Hawaii 96813 Tel. 536-4587

SUBJECT: INCOME, Tax Credit for Energy Storage

BILL NUMBER: HB 2511

INTRODUCED BY: WOODSON, BROWER, CREAGAN, CULLEN, EVANS, HASHEM, ICHIYAMA, ING, KAWAKAMI, KOBAYASHI, C. LEE, LOPRESTI, LOWEN, MIZUNO, MORIKAWA, NAKASHIMA, NISHIMOTO, OHNO, SAIKI, SAN BUENAVENTURA, SAY, TAKAYAMA, TAKUMI, Belatti, Cachola, DeCoite

EXECUTIVE SUMMARY: This bill would allow taxpayers a tax credit for energy storage property to encourage market penetration of this technology. If approved, the credit would be an indeterminate expenditure of public dollars out the back door, and would carry with it massive administrative costs.

BRIEF SUMMARY: Adds a new section to HRS chapter 235 to allow taxpayers to claim an energy storage tax credit for each energy storage property.

For each energy storage property that is used primarily to store and deliver energy to offset part or all of the load on the premises on which the energy storage property is located, the tax credit shall be 30% of the basis for energy storage property first placed in service after June 30, 2016 and before January 1, 2018; 25% of the basis for energy storage property first placed in service after December 31, 2017 and before January 1, 2020; 20% of the basis for energy storage property first placed in service after December 31, 2019 and before January 1, 2022; and 15% of the basis for energy storage property first placed in service after December 31, 2021. The credit is nonrefundable by default, but a taxpayer can make an irrevocable election to give up 30% of the credit amount in return for making the credit amount refundable.

For each energy storage property that is used primarily to store electricity but does not qualify under the previous paragraph, the tax credit shall be 8 cents per kWh stored by the property and delivered and sold to a customer during the first ten taxable years that the property is in service, for energy storage property first placed in service on or before December 31, 2018; 6 cents per kWh for energy storage property first placed in service after December 31, 2018 and before January 1, 2023; and 4 cents per kWh for energy storage property first placed in service after December 31, 2022. This credit is refundable.

Provides that the tax credit under this section shall be construed in accordance with Treasury Regulations and judicial interpretations of similar provisions in sections 25D, 45, and 48 of the Internal Revenue Code.

Provides that a planned community association, condominium association of owners, or cooperative housing corporation may claim the tax credit under this section in its own name for property or facilities placed in service and located on common areas.

States that no credit shall be allowed to any federal, state, or local government or any political subdivision, agency, or instrumentality thereof.

The dollar amount of any utility rebate shall be deducted from the basis of the qualifying energy storage property and its installation before applying the state tax credit. Multiple owners of a single 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 energy storage property.

In the case of a partnership, S corporation, estate, or trust, the tax credit allowable is for every eligible 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 704(b), IRC.

The director of taxation is to prepare any forms that may be necessary to claim a tax credit under this section, including forms identifying the property type of each tax credit claimed under this section. The director may also require the taxpayer to furnish reasonable information to ascertain the validity of the claim for credit made under this section and may adopt rules necessary to effectuate the purposes of this section pursuant to chapter 91.

Requires the department of taxation, in collaboration with DBEDT, to submit a joint annual report to the legislature containing credit utilization data.

Provides that by July 1, 2018, DBEDT shall commence a study on the costs incurred and benefits generated by this section and to the extent that it has helped the state to achieve its energy goals.

EFFECTIVE DATE: July 1, 2016, and shall apply to taxable years beginning after December 31, 2015.

STAFF COMMENTS: The proposed measure would establish income tax credits to encourage the use of energy storage technologies and systems. If such systems are an integral part of a renewable energy system, they may already be eligible for the renewable energy technologies credit under HRS section 235-12.5 as the IRS 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.

The measure does propose definitions and in that way attempts to specify what types of storage property qualify for the proposed credit. In addition, the measure explicitly refers to Internal Revenue Code sections 25D, 45, and 48. Thus administrators could look to the federal standards for these devices for guidance.

In any event, lawmakers need to keep in mind two things. First, the tax system is the device that raises the money that they, lawmakers, like to spend. Using the tax system to shape social policy merely throws the revenue raising system out of whack, making the system less than reliable as there is no way to determine how many taxpayers will avail themselves of the credit and in what amount. The second point to remember about tax credits is that they are nothing more than the

expenditure of public dollars, but out the back door. If, in fact, these dollars were subject to the appropriation process, would taxpayers be as generous about the expenditure of these funds when our kids are roasting in the public school classrooms, there isn't enough money for social service programs, or our state hospitals are on the verge of collapse?

Utilizing tax credits other than to alleviate an excessive tax burden cannot be justified and is of a questionable benefit relative to the cost for all taxpayers. If lawmakers want to subsidize the purchase of this type of technology, then a direct appropriation would be more accountable and transparent.

Furthermore, the additional credit would require changes to tax forms and instructions, reprogramming, staff training, and other costs that could be massive in amount. A direct appropriation, or adding on to an existing program such as Hawaii Energy, may be a far less costly method to accomplish the same thing.

Digested 2/3/2016



Hawaii Solar Energy Association
Serving Hawaii Since 1977

**TESTIMONY OF THE HAWAII SOLAR ENERGY ASSOCIATION
IN REGARD TO HB 2511, RELATING TO SOLAR TAX CREDITS
BEFORE THE
HOUSE COMMITTEE ON ENERGY AND ENVIRONMENTAL PROTECTION
ON
THURSDAY, FEBRUARY 4, 2016**

Chair Lee, Vice-Chair Lowen and members of the committee, my name is Hajime Alabanza, and I represent the Hawaii Solar Energy Association, Inc. (HSEA)

HSEA supports the intent of HB 2511 with comments. This measure amends §235 of the Hawaii Revised Statutes to include a comprehensive tax credit to encourage the use of energy storage systems. Energy storage systems will provide measurable support helping to level the electrical demand curve which will be a financial benefit to all grid customers as well as saving both capital and operation costs for the operating utility.

With the PUC decision to end retail NEM as well as 12-month reconciliation of credits in October of 2015, two new significantly less attractive options for the interconnection of solar systems were instituted: customer grid supply with only a 30 reconciliation period and customer self supply. Currently, there is no installed MW cap for customer self supply and the intention appears to be to steer the market towards options that involve energy storage. Tax incentives like those proposed in HB 2511 support the adoption of energy storage technology.

However, it should be noted that clearer language involving the separation of the two tax credit options should be included within this bill. Is the intent of the bill to provide a tax credit option for the consumer based on the size of their system? It is difficult to ascertain as worded.

Furthermore, some justification should be given regarding the rates proposed in paragraph (2), section (A) – (C). Will the amounts, \$0.08, \$0.06, and \$0.04 be fair and equitable moving forward? What is the evidence for this? Additionally, these rates could be open for adjustment to allow sensitivity to the market as well as input by the proposed studies by DBEDT. HSEA would recommend \$0.10, \$0.08 and \$0.06 to motivate the move towards battery systems which require battery replacement every 4-10 years depending on the chemistry of the battery.

Thank you for the opportunity to testify.



Before the House Committee on Energy and Environmental Protection
Thursday, February 4, 2016, Room 325
HB 2511: Relating to Energy Storage

Aloha Chair Lee, Vice Chair Lowen, and members of the Committee,

On behalf of the Distributed Energy Resources Council of Hawaii (“DER Council”), I would like to testify in partial support for HB 2511 with comments, which creates an energy storage income tax credit. The DER Council is a nonprofit trade organization formed to assist with the development of distributed energy resources and smart grid technologies to support an affordable, reliable, and sustainable energy supply for Hawaii.

Hawaii has recently experienced many significant changes with its distributed energy market and the choices now available to consumers. Last year, the Public Utilities Commission (“Commission”) closed the net energy metering program, and replaced the NEM program with two new tariffs: grid-supply and self-supply systems. We anticipate that once the grid supply allocation is fully subscribed, the use of storage with self-supply systems will greatly increase. Grid-connected self-supply systems with storage stand to provide many valuable services to the electrical grid for the benefit of all utility customers including peak shifting and a variety of ancillary services.

In addition, the utility is currently in the process of reworking its Power Supply Improvement Plans due April 15, 2016. It is anticipated that storage will play an important role in the new plans as the utility grapples with issues of balancing load and generation and meeting our 100% renewable goals.

The DER Council supports the investment tax credit under HB 2511, but we are concerned that an uncapped incentive per energy property might not be sustainable. In addition, the DER Council has several questions regarding the PTC and believes that it needs several amendments to provide a fair incentive.

Valuation of a production tax credit should include several variables

In order to arrive at the correct incentive for a production tax credit several factors need to be considered. Since systems taking the credit under the PTC would be selling and delivering energy, a more useful metric might be that the incentive for these types of systems would be based upon kW, not kWh, in the case where the overall power delivered to the grid is the more important factor. The value of the energy delivered may also depend upon when the power is delivered: energy delivered at peak should receive a higher credit than energy delivered off peak. This is in contrast to a residential or small commercial system which would already be designed to help customers shift peak and use energy more effectively.

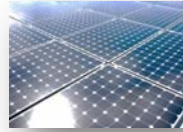
The refundable credit should be applied at a discount for all taxpayers

The DER Council is concerned that HB 2511 has an express provision under section (2)(f) where in energy storage properties that receive the production tax can receive the credit without discount if the credit exceeds the taxpayers Hawaii state tax liability. In addition, HB 2511 states in section (2)(f) that “No property placed in service pursuant to subsection (a)(2) shall be subject to reduction in refund payments for any subsequent year by any legislative act or executive decision.” The DER Council does not support this uneven application of the tax incentive. Right now, under the REITC, any taxpayer who does not have enough Hawaii state tax liability to receive a tax credit may receive the credit in cash at a 30% discount. This discount is applied in HB 2511 to those taxpayers who receive the ITC, but not the PTC as stated above. The DER Council believes that this would unfairly favor systems which receive a PTC and would not be fiscally prudent.

In summary, the DER Council generally supports tax incentives to encourage the development of all types of storage resources. However, the DER Council believes HB 2511 needs several amendments to be a sustainable and fair incentive to move the entire industry forward.

Thank you for the opportunity to testify

Leslie Cole-Brooks
Executive Director
Distributed Energy Resources Council of Hawaii



HOUSE COMMITTEE ON ENERGY & ENVIRONMENTAL PROTECTION

February 4, 2016, 8 A.M.
Room 325
(Testimony is 3 pages long)

TESTIMONY IN SUPPORT OF HB 2511

Aloha Chair Lee, Vice Chair Lowen, and Committee members,

The Blue Planet Foundation supports HB 2511, to facilitate and encourage the use of clean energy by incentivizing the use of grid-connected energy storage technologies and systems through a tax credit (which is limited in scope and duration). Energy storage tax incentives are an appropriate and needed tool to accelerate momentum toward Hawaii's independence from fossil fuels. HB 2511 is structured to provide tax credits for a variety of energy storage technologies, and thus address the varying needs of our island electric grids with technologies most applicable to those needs

Energy storage—whether from batteries, hydrogen, pumped hydro, ultra-capacitors, thermal storage, or other technologies—will become integral part of our island electricity systems. Many of these technologies are proven and commercially available, and other are rapidly improving in capability and price. Much like Hawaii accelerated the use of solar energy through the use of tax credits, energy storage is ready for wide scale adoption in Hawaii.

Incentives for energy storage can accelerate development of a smart grid, reducing carbon emissions, increasing energy reliability, and limiting long-term cost risks

HB 2511 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 in a variety of forms 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 an 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 showed that a 15 MWh battery storage resource effectively reduced the amount of curtailed (i.e. wasted) renewable energy by almost 2 gigawatt hours 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. 2 gigawatt hours of electricity is worth approximately \$500,000. Incentivizing energy storage can help unlock those savings.

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

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 is as dependable as the daily sunrise and sunset. To make full use of all of Hawaii's indigenous 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 which forms will be most cost effective for each application—fuel cells, pumped water, flywheels, ultra capacitors, batteries, thermal storage—we do know that solutions are evolving rapidly. Consider data storage for computers. In the late 1950s, cutting-edge data storage could store the equivalent of

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

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. But at the same time, our high energy prices mean that the sooner we install energy storage, the more ratepayers can benefit.

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

Currently, such backup is often in the form of "spinning reserves," or fossil fuel plants that are kept running even when the energy is not needed. Meanwhile, grid-scale storage technology is 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. Paniolo Power on the Big Island is evaluating the use of storage to "provide up to up to five hours of firm, dispatchable power, which would enable load shifting and increase renewable penetration significantly."² KIUC on Kaua'i is similarly taking a hard look at new energy storage options. **Forward-looking energy policy should support and accelerate these potentially revolutionary efforts.**

Please forward HB 2511.

Thank you for the opportunity to testify.

² <http://parkerranch.com/paniolo-power-company-to-issue-a-pumped-storage-hydro-request-for-qualifications/>

House Committee on Energy & Environmental Protection

February 4th, 2016 8:00am

Testimony in support of HB 2511 by Anthony Aalto

Aloha Chair Lee, Vice Chair Lowen and Members of the Committee,

I thank you for this opportunity to testify. My name is Anthony Aalto. I am the Chair of the Sierra Club of O'ahu which has more than 8,000 registered members and supporters on this island. I am testifying today on their behalf, in strong support of HB 2511.

This Legislature and this Administration have made the shift to a clean energy future a top priority for Hawaii. We have set a goal of weaning ourselves from all fossil fuels by 2045.

Given our massive resources of renewable solar and wind power, we have the capacity to achieve that goal and, in the process, to generate huge savings for the people of Hawaii by ending the practice of sending billions of dollars overseas every year to pay for the importation of oil, coal and gas. This revolution in our energy infrastructure also presents us with the opportunity to build a new pillar of Hawaii's economy – one which will create thousands of well paid blue and white collar jobs.

But solar and wind are intermittent sources of power. The ability to exploit their full potential depends on making them as "firm," or reliable, as the oil and coal power which currently back-up the grid. And the way to ensure that solar and wind are dependable is to back them up with large storage capacity.

So we need to incentivize investments in storage. Fortunately we have a very successful model of how to encourage the shift to renewable energy: it's called the renewable energy technologies income tax (RETIT) credit, which has been spectacularly effective in spurring private citizens and businesses to install small-scale rooftop photovoltaic arrays and large-scale solar and wind farms. However the RETIT credit applies only to generation. It does not apply to storage. This bill has the potential to change that. If enacted it will help give a new stimulus to our rapid march to a clean energy future.

We strongly urge you to support this bill.

Mahalo



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In SUPPORT of HB 2511 RELATING TO ENERGY STORAGE

Before the
HOUSE COMMITTEE ON ENERGY & ENVIRONMENTAL PROTECTION

Thursday, February 4, 2016 8:00 a.m.

Aloha, Chair Lee, Vice-Chair Lowen and members of the Committee.

My name is Alan Lennard. I am the Managing director of Green Power Projects LLC and a Director of Renewable Energy Action Coalition of Hawaii (REACH). Green Power Projects LLC is a Solar project facilitation company working towards 100% Renewable Energy capacity in Hawaii. REACH is a trade association whose vision is a Hawaiian energy economy based 100% on renewable sources indigenous to Hawaii.

We are in Full **SUPPORT** of HB 2511.

Right now, Hawaii's renewable energy technologies income tax (RETIT) 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 installed in Hawaii will be undispachable and unusable when imported fuels stop flowing to Hawaii.

We **SUPPORT** HB 2511 – creating an energy storage investment 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.

Alan Lennard -dy signature

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Testimony of ERIK KVAM

Director of Renewable Energy Action Coalition of Hawaii

e-mail: Erik.Kvam@REACHhawaii.org

In SUPPORT of HB 2511 RELATING TO ENERGY STORAGE

**Before the
HOUSE COMMITTEE ON ENERGY & ENVIRONMENTAL PROTECTION**

Thursday, February 4, 2016 8:00 a.m.

Aloha, Chair Lee, Vice-Chair Lowen and members of the Committee.

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

REACH is in **SUPPORT** of HB 2511.

Right now, Hawaii's renewable energy technologies income tax (RETIT) 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 installed in Hawaii will be undispachable and unusable when imported fuels stop flowing to Hawaii.

REACH **SUPPORTS** HB 2511 – creating an energy storage investment 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.

From: mailinglist@capitol.hawaii.gov
Sent: Tuesday, February 02, 2016 3:41 PM
To: EEPtestimony
Cc: chris@mentzel.com
Subject: Submitted testimony for HB2511 on Feb 4, 2016 08:00AM

HB2511

Submitted on: 2/2/2016

Testimony for EEP on Feb 4, 2016 08:00AM in Conference Room 325

Submitted By	Organization	Testifier Position	Present at Hearing
Chris Mentzel	Individual	Support	No

Comments: Aloha, Chair Lee, Vice-Chair Lowen and members of the Committee. My name is Chris Mentzel. I am the CEO of HINA, and my vision is a Hawaiian energy economy based 100% on renewable sources indigenous to Hawaii. I am in SUPPORT of HB 2511. Right now, Hawaii's renewable energy technologies income tax (RETIT) credit applies only to intermittent solar and wind generation. Without large amounts of energy storage, the large amounts of intermittent solar and wind generation that have been and will be installed in Hawaii will be unuseable by the grid. With Hawaii at the forefront of clean energy development, we can be early adopters of energy storage technologies and play an important role in bringing them to market. Thank you for allowing me to testify.

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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From: mailinglist@capitol.hawaii.gov
Sent: Wednesday, February 03, 2016 8:58 AM
To: EEPtestimony
Cc: carl@votecampagna.com
Subject: Submitted testimony for HB2511 on Feb 4, 2016 08:00AM

HB2511

Submitted on: 2/3/2016

Testimony for EEP on Feb 4, 2016 08:00AM in Conference Room 325

Submitted By	Organization	Testifier Position	Present at Hearing
Carl Campagna	Individual	Support	No

Comments: Mahalo for the opportunity to provide testimony for this important issue. I am in support of this measure. Storage capacity is the key to our renewable energy future. With sufficient storage on both sides of the utility grid, utility and distributed, together with demand response technology, which is available and even latent in many inverters, we will more readily be able to achieve our renewable portfolio standard of 100% by 2015. furthermore, reduce the import of fossil fuel to zero. The costs of storage have been decreasing for years as more and more has been integrated. tax credits, such as this one, will only increase integration, which will lower the prices even more and encourage development throughout Hawaii. Mahalo

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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From: mailinglist@capitol.hawaii.gov
Sent: Tuesday, February 02, 2016 4:14 PM
To: EEPtestimony
Cc: octopus@maui.net
Subject: Submitted testimony for HB2511 on Feb 4, 2016 08:00AM

HB2511

Submitted on: 2/2/2016

Testimony for EEP on Feb 4, 2016 08:00AM in Conference Room 325

Submitted By	Organization	Testifier Position	Present at Hearing
Rene Umberger	Individual	Support	No

Comments: Mahalo Chair Lee for hearing this important measure. In strong support!
Aloha, Rene Umberger

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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From: mailinglist@capitol.hawaii.gov
Sent: Wednesday, February 03, 2016 8:04 AM
To: EEPtestimony
Cc: dylanarm@hawaii.edu
Subject: *Submitted testimony for HB2511 on Feb 4, 2016 08:00AM*

HB2511

Submitted on: 2/3/2016

Testimony for EEP on Feb 4, 2016 08:00AM in Conference Room 325

Submitted By	Organization	Testifier Position	Present at Hearing
Dylan Armstrong	Individual	Support	No

Comments:

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LATE



Testimony of Green Charge Networks, LLC
Dan Vickery, Manager of Policy and Market Development
e-mail: dvickery@greencharge.net

In SUPPORT of HB 2511 RELATING TO ENERGY STORAGE

Before the
HOUSE COMMITTEE ON ENERGY & ENVIRONMENTAL PROTECTION

Aloha, Chair Lee, Vice-Chair Lowen and members of the Committee.

My name is Dan Vickery and I am submitting these comments on behalf of Green Charge Networks. Green Charge is a developer of customer-sited energy storage systems for commercial customer bill management and utility grid balancing.

Green Charge Networks is in **support** of HB 2511.

Current tax credits, such as the Renewable Energy Technologies Income Tax (RETIT) credit, apply to intermittent renewable resources only, and there is currently no similar credit to dispatchable grid-firming resources such as energy storage. Without substantial development of grid-balancing resources alongside increasing amounts of intermittent solar and wind energy resources, these intermittent resources will become overly burdensome to the state's electrical infrastructure, and accordingly, will provide minimal benefits.

Green Charge therefore **supports** HB 2511 – creating an energy storage investment tax credit -- to encourage the development of dispatchable renewable generation, which will support solar and wind energy resources, and serve to meet Hawaii's needs when imported fuels stop flowing to the state.

Thank you for allowing for this testimony.



LATE

**Testimony of Jon Fortune
Director of Regulatory & Energy Services, Sunverge Energy Inc.**

In SUPPORT of HB 2511 RELATING TO ENERGY STORAGE

**Before the
HOUSE COMMITTEE ON ENERGY & ENVIRONMENTAL PROTECTION**

Thursday, February 4, 2016 8:00 a.m.

Aloha, Chair Lee, Vice-Chair Lowen and members of the Committee.

My name is Jon Fortune and I am a Director of Regulatory & Energy Services for Sunverge Energy, Inc. (Sunverge). Sunverge Energy was founded in 2009 in Stockton, California, by Dean Sanders and Ken Munson to create a UL-certified appliance that combines renewable energy storage batteries, power electronics and cloud-based management and analytical software to optimize the interface of distributed energy and the grid by enabling “smart” renewable power. That appliance – purchased by homeowners, businesses and major global utilities – is now known as the Sunverge Solar Integration System (SIS). Today, more than 450 Sunverge intelligent storage solutions are installed in the U.S., Canada, Australia and New Zealand, with an average uptime of more than 99 percent.

Some of our units are already operating in Hawaii and we are anticipating more than 300 new Sunverge SIS appliances could be installed in over the next year and beyond:

- 1) creating jobs for installers and industry representatives;
- 2) bolstering grid resiliency and customer reliability;
- 3) and enabling interconnection of more solar capacity in areas with the grid where export is no longer an option.

Consumers, business owners and utilities use the Sunverge SIS to store renewable power for use when the sun isn’t shining or the wind blowing, bring down energy bills and enable utilities to automatically execute demand response programs and link multiple individual SIS into “Virtual Power Plants” to meet peak energy demand.

Our belief is that the Hawaii grid is a social good. It should be made stronger and more resilient for everyone’s benefit.

Sunverge is in **SUPPORT** of HB 2511.

Presently, Hawaii's renewable energy technologies income tax (RETIT) credit applies only to intermittent solar and wind generation. It does not directly 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 installed in Hawaii will be non-dispatchable and non-coincident with late day and evening grid usage when imported fuels stop flowing to Hawaii.

Sunverge **SUPPORTS** HB 2511 – creating an energy storage investment 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.

A handwritten signature in black ink, appearing to read 'Jon Fortune', with a stylized flourish at the end.

Jon Fortune
Director, Regulatory & Energy Services
Sunverge Energy, Inc.