

SB 365

RELATING TO ENERGY STORAGE.

Provides an investment income tax credit for energy storage property that receives, stores, and delivers energy. Requires DOTAX and DBEDT to submit annual reports to the legislature regarding the energy storage income tax credit. Requires DBEDT to complete a study on the impacts and benefits of the tax credit and its contribution to the State reaching its energy goals. Applies to taxable years after 12/31/16.



DEPARTMENT OF BUSINESS, ECONOMIC DEVELOPMENT & TOURISM

DAVID Y. IGE
GOVERNOR

LUIS P. SALAVERIA
DIRECTOR

MARY ALICE EVANS
DEPUTY DIRECTOR

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Statement of
LUIS P. SALAVERIA
Director
Department of Business, Economic Development and Tourism
before the
SENATE COMMITTEE ON TRANSPORTATION AND ENERGY
Wednesday, February 15, 2017
1:20 p.m.
State Capitol, Conference Room 225

in consideration of
SB 365
RELATING TO ENERGY STORAGE.

Chair Inouye, Vice Chair Dela Cruz, and Members of the Committee.

The Department of Business, Economic Development and Tourism (DBEDT) offers comments on SB 365, which provides an investment income tax credit for energy storage property, requires the Department of Taxation and DBEDT to submit annual reports to the legislature regarding the energy storage income tax credit, and requires DBEDT to complete a study on the impacts and benefits of the tax credit and its contribution to the state reaching its energy goals.

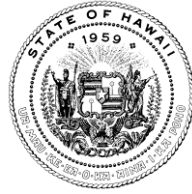
DBEDT recognizes that energy storage has an important role in achieving Hawaii's clean energy goals and can provide various benefits to the electric system. However, DBEDT is not certain that tax credits ought to be the preferred vehicle for incentivizing storage given the various ongoing regulatory proceedings that could also serve as incentives and market drivers for storage and be more directly tied to the necessary and most cost-effective resources to meet our State's clean energy goals. For example, the demand for storage will be influenced by the HECO Companies' Power Supply Improvement Plan (PSIP); once approved it will provide guidance for the type of storage needed (e.g. load shifting, contingency, utility, distributed) and how much capacity is needed for each type. Also, the Distributed Energy Resources docket and Demand Response docket may result in modifying or creating new tariffs or rate structures that could provide the financial mechanisms needed to incentivize energy storage.

Should the Legislature move forward with this measure, we recommend that it specify if the tax credit should apply equally to each type of energy storage property (e.g. “residential”, “multi-family”, “commercial”, and “utility-scale” will generally have different pricing, which tends to be more favorable with greater capacity) and if the energy storage property ought to be grid-connected. Our general preference is for the energy storage properties that benefit from public funds to be grid-connected and capable of being grid-supportive.

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, given the limited State budget and without further understanding the relative impact on the expansion of renewable energy resources, we are concerned about the unknown expansion of the aggregate storage tax credit provided by this bill, and 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 on SB 365.



DAVID Y. IGE
GOVERNOR

SHAN S. TSUTSUI
LT. GOVERNOR

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CATHERINE P. AWAKUNI COLÓN
DIRECTOR

JO ANN M. UCHIDA TAKEUCHI
DEPUTY DIRECTOR

TO THE SENATE COMMITTEE ON TRANSPORTATION AND ENERGY

THE TWENTY-NINTH LEGISLATURE
REGULAR SESSION OF 2017

WEDNESDAY, FEBRUARY 15, 2017
1:20 P.M.

TESTIMONY OF DEAN NISHINA, EXECUTIVE DIRECTOR, DIVISION OF
CONSUMER ADVOCACY, DEPARTMENT OF COMMERCE AND CONSUMER
AFFAIRS, TO THE HONORABLE LORRAINE R. INOUE, CHAIR,
AND MEMBERS OF THE COMMITTEE

SENATE BILL NO. 365 - RELATING TO ENERGY STORAGE

DESCRIPTION:

This measure proposes to provide an investment income tax credit for energy storage property that receives, stores, and delivers energy and requires the Department of Taxation ("DOTAX") and the Department of Business, Economic Development and Tourism ("DBEDT") to submit annual reports to the legislature regarding the energy storage income tax credit. The measure proposes to require DBEDT to complete a study on the impacts and benefits of the tax credit and its contribution to the State reaching its energy goals. Applies to taxable years after December 31, 2016.

POSITION:

The Division of Consumer Advocacy ("Consumer Advocate") opposes this bill.

COMMENTS:

Energy storage will likely play an important role in stabilizing the electricity grid as greater amounts of intermittent renewable energy are added to the electricity generation mix. On the other hand, energy storage is not the only means by which grid stabilization can be achieved. Energy efficiency, demand response, and fast starting and ramping generating units will also be key components in accommodating intermittent resources, all possibly at lower true costs than existing energy storage technologies. Providing a tax credit for any given resource can boost an uneconomic

option over more cost-effective alternatives. The Consumer Advocate believes that economics and true cost, without subsidies, should drive the market selection of energy resources.

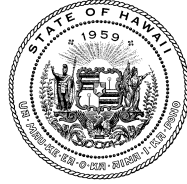
Granted, at present, energy storage technologies, such as battery storage, have exhibited declining costs in recent years. However, in spite of this recent trend, energy storage systems are still very expensive as compared to other alternatives that can be used to modernize the grid. As a result, energy storage systems are likely to be affordable to only the wealthiest consumers until further significant price decreases occur. A tax credit that might encourage wealthy consumers to decrease their contributions to the grid would have the potential unintended consequence of placing a greater financial burden on less affluent consumers who must remain connected to the grid without being able to offset their load with rooftop solar photovoltaic systems and/or take advantage of energy storage systems.

The Consumer Advocate generally defers to the Hawaii Department of Taxation as it relates to this bill and the potential impact on customers in the area. The Consumer Advocate, therefore, opposes this proposed tax credit that will be potentially detrimental to low income ratepayers and may unduly affect technology investment decisions that should be primarily guided by true and total technology costs.

Thank you for this opportunity to testify.

DAVID Y. IGE
GOVERNOR

SHAN TSUTSUI
LT. GOVERNOR



STATE OF HAWAII
DEPARTMENT OF TAXATION
P.O. BOX 259
HONOLULU, HAWAII 96809
PHONE NO: (808) 587-1540
FAX NO: (808) 587-1560

MARIA E. ZIELINSKI
DIRECTOR OF TAXATION

DAMIEN A. ELEFANTE
DEPUTY DIRECTOR

To: The Honorable Lorraine R. Inouye, Chair
and Members of the Senate Committee on Transportation and Energy

Date: Wednesday, February 15, 2017

Time: 2:30 P.M.

Place: Conference Room 225, State Capitol

From: Maria E. Zielinski, Director
Department of Taxation

Re: S.B. 365, Relating to Energy Storage

The Department of Taxation (Department) appreciates the intent of S.B. 365 and provides the following comments for your consideration.

S.B. 365 creates a new energy storage tax credit. The measure is effective upon approval and applies to taxable years beginning after December 31, 2016. S.B 365 is summarized as follows:

Amount of the credit:

The amount of the credit is determined as a percentage of the basis of energy storage property. The basis is reduced by the amount of any utility rebate. The percentage applied depends on when the property is installed and placed in service. The amounts are:

- 30% of basis - June 30, 2017 to December 31, 2019;
- 26% of basis – January 1, 2020 to December 31, 2020.
- 22% of basis – January 1, 2021 to December 31, 2021
- 10% of basis – January 1, 2022 and thereafter.

Refundable:

Taxpayers may elect to take a thirty percent reduction in the amount of the credit to make the credit refundable.

Taxpayers without liabilities can claim the credit

A provision is included to allow a planned community association, a condominium association of owners, or a cooperative housing corporation to claim the tax credit in its own name for property placed in service and located on common areas.

Reports to the legislature:

S.B. 365 additionally requires an annual report to the legislature on the results of the tax credit by the Department and the Department of Business, Economic Development, and Tourism (DBEDT), and requires DBEDT to conduct a study regarding whether the tax credit has helped the state meet its energy goals.

First, the Department notes that this measure does not contain caps. This is particularly important as the “per system” caps in the renewable energy technologies income tax credit (RETITC) were very difficult to administer prior to the issuance of administrative rules in 2013. The Department prefers a credit based on a percentage as it promotes efficiency and eliminates any potential multiple credit abuse.

Second, the Department notes that the refundable credit election for taxpayers whose income was fully exempt or lower than \$20,000 for single filers or \$40,000 for joint filers in the RETITC is not included in this measure. If this was an inadvertent omission the Department suggests adding this provision.

Third, the Department will make the necessary changes to the forms, instructions and the computer system to collect and provide the data necessary for the reporting requirement. However, the Department defers to DBEDT regarding its ability to conduct dynamic economic analysis as required by this report.

Finally, the Department requests that the effective date of this measure be changed to apply to taxable years beginning after December 31, 2017 to allow sufficient time for changes to forms, instructions, and the Department’s computer system.

Thank you for the opportunity to provide 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: SB 365

INTRODUCED BY: INOUYE, GREEN, IHARA, KIDANI, Keith-Agaran

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.

SYNOPSIS: 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, the tax credit shall be 30% of the basis for energy storage property first placed in service after June 30, 2017, and before January 1, 2020; 26% of the basis for energy storage property first placed in service in calendar year 2020; 22% of the basis for energy storage property first placed in service in calendar year 2021; and 10% of the basis for energy storage property first placed in service after December 31, 2021.

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 cost of the property.

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.

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.

Defines “basis” as costs related to the energy storage property under subsection (b), including accessories, energy storage, and installation. The term does not include the cost of consumer incentive premiums unrelated to the operation of the property or offered with the sale of the energy storage property and costs for which another credit is claimed under this chapter. Any cost incurred and paid for the repair, construction, or reconstruction of a structure in conjunction with the installation and placing in service of energy storage property shall not constitute a part of the basis; but costs incurred for the physical support of the energy storage property shall constitute part of the basis. The basis used under this section shall be consistent with the use of basis in section 25D or 48 of the Internal Revenue Code; but, for the purposes of calculating the credit allowed under this section, the basis of the energy storage property shall not be reduced by

the amount of any federal tax credit or other federally subsidized energy financing received by the taxpayer.

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.

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.

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, 2019, 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: Upon approval, shall apply to taxable years beginning after December 31, 2016.

STAFF COMMENTS: 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?

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.

Testimony of Cruz Romero
Vice President of Hi Power Solar
e-mail: Erik.Kvam@REACHawaii.org

In SUPPORT of SB 365 RELATING TO ENERGY STORAGE

Before the
SENATE COMMITTEE ON TRANSPORTATION AND ENERGY

Wednesday, February 15, 2017 1:20 p.m.

Aloha, Chair Inouye, Vice-Chair Dela Cruz and members of the Committee.

My name is Cruz Romero. I am the Vice President of Hi Power Solar. Hi Power Solar is a local, family owned, General Solar Contractor here in Hawaii whose vision is a Hawaiian energy economy based 100% on renewable sources indigenous to Hawaii.

100% renewable energy means energy security, energy resiliency and environmental preservation benefits for all Hawaiians.

Hi Power Solar **SUPPORTS SB 365**.

With the end of new renewable generation that exports power to the grid, Hawaii's most powerful force for achieving 100% renewable energy – its electric power customers (including its electric utilities) – have been taken out of the game.

Hawaii's electric power customers been sidelined without viable options for investing in new renewable generation needed to carry Hawaii to 100% renewable energy.

And because Hawaii's electric power customers have been sidelined, many hundreds of skilled well-paying jobs have been lost in Hawaii's renewable energy industry.

SB 365 provides a tax credit for investment in the energy storage systems that will bring back Hawaii's electric customers (including Hawaii's electric utilities) into Hawaii's markets for new renewable generation. Hawaii electric power customers' investments in energy storage and new renewable generation, incentivized by the proposed tax credit, will bring back hundreds of renewable energy jobs lost during the last 2 years.

Hi Power Solar and its members understand that enactment of **SB 365** may come at a cost to the State Treasury in lost tax revenues. **So we propose offering the same tax incentive for local people of Hawaii and lower tax incentive for investors out of state. Like a Kamaiana credit versus an out of state credit. This will ensure more our tax dollars stay here in Hawaii so that we spend more money here in Hawaii.** Hi Power Solar **SUPPORTS SB 365** to bring Hawaii's electric power customers back into Hawaii's renewable energy markets, and to bring back hundreds of skilled well-paid jobs in Hawaii. Let's reach our goal of 100% renewables together.

Thank you for allowing me to testify in **SUPPORT** of **SB 365**.



Healthy Climate Communities

Testimony in support of SB365 RELATING TO ENERGY STORAGE

SENATE COMMITTEE ON TRANSPORTATION AND ENERGY

Hearing Wednesday, February 15, 2017 1:20 p.m.

Aloha Chair Inouye, Vice-Chair Dela Cruz and members of the Committee,

Please support SB365.

By making it more affordable for Hawaii residents to purchase energy storage, time periods of peak demand for power can be evened out. The grid will require less fossil fuel generation to meet high demand times and more renewable energy can be absorbed by the grid, allowing more Hawaii residents to benefit from the low costs and clean consciences that come with using solar energy.

Mahalo,

Dr. Lisa Marten
Executive Director
Healthy Climate Communities
halthyclimate@hawaii.rr.com

Testimony of Charles Chacko
Vice President of Greenpath Technologies Inc
e-mail: charles@greenpath-tech.com

In SUPPORT of SB 365 RELATING TO ENERGY STORAGE

Before the
SENATE COMMITTEE ON TRANSPORTATION AND ENERGY

Wednesday, February 15, 2017 1:20 p.m.

Aloha, Chair Inouye, Vice-Chair Dela Cruz and members of the Committee.

My name is Charles Chacko. I am a Vice President of Greenpath Technologies Inc (GPT). GPT is a solar power contractor whose vision is a Hawaiian energy economy based 100% on renewable sources indigenous to Hawaii.

100% renewable energy means energy security, energy resiliency and environmental preservation benefits for all Hawaiians.

GPT SUPPORTS SB 365.

With the end of new renewable generation that exports power to the grid, Hawaii's most powerful force for achieving 100% renewable energy – its electric power customers (including its electric utilities) – have been taken out of the game.

Hawaii's electric power customers been sidelined without viable options for investing in new renewable generation needed to carry Hawaii to 100% renewable energy.

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SB 365 provides a tax credit for investment in the energy storage systems that will bring back Hawaii's electric customers (including Hawaii's electric utilities) into Hawaii's markets for new renewable generation. Hawaii electric power customers' investments in energy storage and new renewable generation, incentivized by the proposed tax credit, will bring back hundreds of renewable energy jobs lost during the last 2 years.

GPT SUPPORTS SB 365 to bring Hawaii's electric power customers back into Hawaii's renewable energy markets, and to bring back hundreds of skilled well-paid jobs in Hawaii.

Thank you for allowing me to testify in **SUPPORT** of **SB 365**.

Testimony of Chad Bundy
Owner Hawaii Energy Consulting LLC
e-mail: chad.bundy@hotmail.com

In SUPPORT of SB 365 RELATING TO ENERGY STORAGE

Before the
SENATE COMMITTEE ON TRANSPORTATION AND ENERGY

Wednesday, February 15, 2017 1:20 p.m.

Aloha, Chair Inouye, Vice-Chair Dela Cruz and members of the Committee.

My name is Chad Bundy. I am the Owner of Hawaii Energy Consulting LLC. I work everyday to help everyone in the State realize a cleaner, more energy independent lifestyle. I am passionate about this industry and excited for the future of Hawaii becoming 100% Renewable by 2045.

100% renewable energy means energy security, energy resiliency and environmental preservation benefits for all Hawaiians.

I SUPPORT SB 365.

With the end of new renewable generation that exports power to the grid, Hawaii's most powerful force for achieving 100% renewable energy – its electric power customers (including its electric utilities) – have been taken out of the game.

Hawaii's electric power customers been sidelined without viable options for investing in new renewable generation needed to carry Hawaii to 100% renewable energy.

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REACH and its members understand that enactment of **SB 365** may come at a cost to the State Treasury in lost tax revenues. To the extent that is a concern, REACH invites the legislature to consider adjusting the tax credit rates in **SB 365** as a preferred method for addressing that concern.

REACH SUPPORTS SB 365 to bring Hawaii's electric power customers back into Hawaii's renewable energy markets, and to bring back hundreds of skilled well-paid jobs in Hawaii.

Thank you for allowing me to testify in **SUPPORT of SB 365.**

From: mailinglist@capitol.hawaii.gov
Sent: Wednesday, February 8, 2017 1:20 PM
To: TRE Testimony
Cc: nick.dizon@nidoncomputer.com
Subject: Submitted testimony for SB365 on Feb 15, 2017 13:20PM

SB365

Submitted on: 2/8/2017

Testimony for TRE on Feb 15, 2017 13:20PM in Conference Room 225

Submitted By	Organization	Testifier Position	Present at Hearing
Nick Dizon	NIDON Clean Energy	Support	Yes

Comments: There are two major issues confronting wide adoption of energy storage in the state of Hawaii or anywhere else in the nation and the world. First is cost, which this bill directly addresses. The second is a combination of design and programming, which this bill indirectly supports. While it is easy to understand that batteries are expensive, what is less understood is how to design and deploy energy storage systems that are reliable and cost effective. Currently, most renewable energy companies in Hawaii market energy storage as backup power for which there is no payback or return on investment. This bill does not resolve this situation making energy storage not broadly cost effective. However, this bill when combined with energy storage systems that currently have a 7 year payback, could reduce the time to less than 5 years, not including utility rate increases. Most battery technologies tout a 15 year plus life creating a potential 10 years of free cash flow. This bill could drive energy storage much like the NEM did over the past 10 years while also making the 100% renewable goal of 2045 more attainable. It would also drive employment and training in renewable energy and storage to a much deeper sustainable level than the previous grid supply only era.

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



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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 SB 365 RELATING TO ENERGY STORAGE

**Before the
SENATE COMMITTEE ON TRANSPORTATION AND ENERGY**

Wednesday, February 15, 2017 1:20 p.m.

Aloha, Chair Inouye, Vice-Chair Dela Cruz 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.

100% renewable energy means energy security, energy resiliency and environmental preservation benefits for all Hawaiians.

REACH SUPPORTS SB 365.

With the end of new renewable generation that exports power to the grid, Hawaii's most powerful force for achieving 100% renewable energy – its electric power customers (including its electric utilities) – have been taken out of the game.

Hawaii's electric power customers have been sidelined without viable options for investing in new renewable generation needed to carry Hawaii to 100% renewable energy.

And because Hawaii's electric power customers have been sidelined, many hundreds of skilled well-paying jobs have been lost in Hawaii's renewable energy industry.

SB 365 provides a tax credit for investment in the energy storage systems that will bring back Hawaii's electric customers (including Hawaii's electric utilities) into Hawaii's markets for new renewable generation. Hawaii electric power customers' investments in energy storage and new renewable generation, incentivized by the proposed tax credit, will bring back hundreds of renewable energy jobs lost during the last 2 years.

REACH and its members understand that enactment of **SB 365** may come at a cost to the State Treasury in lost tax revenues. To the extent that is a concern, REACH invites the legislature to consider adjusting the tax credit rates in **SB 365** as a preferred method for addressing that concern.

REACH **SUPPORTS SB 365** to bring Hawaii's electric power customers back into Hawaii's renewable energy markets, and to bring back hundreds of skilled well-paid jobs in Hawaii.

Thank you for allowing me to testify in **SUPPORT** of **SB 365**.

**Testimony of Angel Okuhara
Sales at Greenpath Technologies Inc
e-mail: angel@greenpath-tech.com**

In SUPPORT of SB 365 RELATING TO ENERGY STORAGE

**Before the
SENATE COMMITTEE ON TRANSPORTATION AND ENERGY**

Wednesday, February 15, 2017 1:20 p.m.

Aloha, Chair Inouye, Vice-Chair Dela Cruz and members of the Committee.

My name is Angel Okuhara. I am the lead sales-person of Lezeti Solar Hybrid A/C system at Greenpath Technologies Inc (GPT). GPT is a solar power contractor whose vision is a Hawaiian energy economy based 100% on renewable sources indigenous to Hawaii.

100% renewable energy means energy security, energy resiliency and environmental preservation benefits for all Hawaiians.

GPT SUPPORTS SB 365.

With the end of new renewable generation that exports power to the grid, Hawaii's most powerful force for achieving 100% renewable energy – its electric power customers (including its electric utilities) – have been taken out of the game.

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GPT SUPPORTS SB 365 to bring Hawaii's electric power customers back into Hawaii's renewable energy markets, and to bring back hundreds of skilled well-paid jobs in Hawaii.

Thank you for allowing me to testify in **SUPPORT** of **SB 365**.



Hawaii Solar Energy Association

Serving Hawaii Since 1977

**TESTIMONY OF THE HAWAII SOLAR ENERGY ASSOCIATION
IN REGARD TO SB 365, RELATING TO ENERGY STORAGE
BEFORE THE
SENATE COMMITTEE ON TRANSPORTATION AND ENERGY
ON
Wednesday, February 15, 2017**

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

HSEA supports SB 365 with comments. This measure amends §235 of the Hawaii Revised Statutes to include a 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. Furthermore, tax incentives for solar energy need to be adopted by the state to advance the growth of renewable energy and, at a state level, accelerate progress towards a 100% renewable energy goal by 2045.

With recent changes in solar policy there will be a greater emphasis within the market for energy storage systems, which have inherent grid support functionality. With the PUC decision to end retail NEM in October of 2015, two new options for the interconnection of solar systems were instituted: customer grid supply (CGS) with only a 30-day reconciliation period and customer self supply (CSS). As it stands, CGS has reached its 35MW cap, leaving the CSS program as the single most viable program for rooftop solar—a program that intends to steer the market towards options that involve energy storage. In spite of this, after over a year since its inception, the CSS program has realized just ten energized systems. Although there are a variety of reasons for its slow adoption, the cost of energy storage systems is a paramount factor. Ultimately, tax incentives like those proposed in SB 365 are imperative to expand consumer choice, contribute to the state's 100% clean energy goal, and provide value to the local economy.

Thank you for the opportunity to testify.

From: mailinglist@capitol.hawaii.gov
Sent: Tuesday, February 14, 2017 8:29 AM
To: TRE Testimony
Cc: brandie@yourenergyinc.com
Subject: Submitted testimony for SB365 on Feb 15, 2017 14:30PM

SB365

Submitted on: 2/14/2017

Testimony for TRE on Feb 15, 2017 14:30PM in Conference Room 225

Submitted By	Organization	Testifier Position	Present at Hearing
Brandie	Your Energy Inc.	Support	No

Comments: Testimony of BRANDIE LEATHERS Principal and CEO V2 Energy Solutions LLC. & Your Energy Inc. e-mail: Brandie@yourenergyinc.com In SUPPORT of SB 365 RELATING TO ENERGY STORAGE Before the SENATE COMMITTEE ON TRANSPORTATION AND ENERGY Wednesday, February 15, 2017 1:20 p.m. Aloha, Chair Inouye, Vice-Chair Dela Cruz and members of the Committee. My name is Brandie Leathers. I am the Principal and CEO of V2 Energy Solutions LLC. and Your Energy Inc. 100% renewable energy means energy security, energy resiliency and environmental preservation benefits for all Hawaiians. V2 Energy Solutions LLC and Your Energy Inc. SUPPORTS SB 365. With the end of new renewable generation that exports power to the grid, Hawaii's most powerful force for achieving 100% renewable energy – its electric power customers (including its electric utilities) – have been taken out of the game. Hawaii's electric power customers been sidelined without viable options for investing in new renewable generation needed to carry Hawaii to 100% renewable energy. And because Hawaii's electric power customers have been sidelined, many hundreds of skilled well-paying jobs have been lost in Hawaii's renewable energy industry.

SB 365 provides a tax credit for investment in the energy storage systems that will bring back Hawaii's electric customers (including Hawaii's electric utilities) into Hawaii's markets for new renewable generation. Hawaii electric power customers' investments in energy storage and new renewable generation, incentivized by the proposed tax credit, will bring back hundreds of renewable energy jobs lost during the last 2 years. V2 Energy Solutions LLC. and its members understand that enactment of SB 365 may come at a cost to the State Treasury in lost tax revenues. To the extent that is a concern, V2 Energy Solutions LLC. invites the legislature to consider adjusting the tax credit rates in SB 365 as a preferred method for addressing that concern. V2 Energy Solutions LLC. SUPPORTS SB 365 to bring Hawaii's electric power customers back into Hawaii's renewable energy markets, and to bring back hundreds of skilled well-paid jobs in Hawaii. Thank you for allowing me to testify in SUPPORT of SB 365.

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 of Kyle Blickley

Vice President, HNU Energy

Senate on Committee and Transportation

Wednesday, February 15, 2017 2:30 pm

State Capitol, Conference Room 414

In SUPPORT of SB 365 RELATING TO ENERGY STORAGE

I am testifying in support of the Senate Bill No. 365 Energy Storage Tax Credit which encourages the adoption of energy storage systems for electricity users.

Hawaii has seen significant growth in renewable energy adoption in the past few years, in large part due to the renewable energy income tax credit which has encouraged cost effective investments in renewable energy for all types of electricity customers.

However, the increasing capacity of renewable energy systems without energy storage on the existing electrical infrastructure can result in some issues, largely due to the variable nature of renewable energy systems. In addition, the renewable energy production curve does not always match the profile of the demand.

The implementation of cost effective energy storage systems will allow the continued growth of the renewable energy infrastructure in Hawaii. This will lead to more skilled jobs in the local economy and will reduce our reliance on imported fossil fuels.

One of the main targets of the Aloha Plus Challenge is 100% Renewable Energy Generation by 2045. With the right mix of energy storage and renewable energy systems, this long term clean energy goal can be achieved. An energy storage tax credit will provide the incentive for customers and the motivation for future business investments, in this critical piece of our sustainable energy future.

Thank you for allowing me the opportunity to show my strong support for this important bill.

Statement of
Dr. Michael Reiley
President, HNU Energy
before the
SENATE COMMITTEE ON TRANSPORTATION AND ENERGY
Wednesday, February 15, 2017
1:20 p.m.
State Capitol, Conference Room 414

In SUPPORT of SB 365 RELATING TO ENERGY STORAGE

Chair Inouye and Members of the Committee on Transportation and Energy.

HNU Energy **supports** SB365, which incentivizes Hawaii electricity customers to invest in renewable energy for their homes and businesses.

Hawaii led the world in renewable energy grid penetration, but without distributed energy storage, our grids cannot integrate significant additional generation.

Energy storage is the solution that will enable Hawaii to achieve the 100% renewable energy mandate. The long term benefits of grid stability and cost efficiency are substantial, but just as PV and wind needed incentives to compete with fossil fuel energy generation, energy storage technologies require similar incentives.

We support the REACH bill because it presents a responsible incentive package, which decreases in alignment with anticipated technology advancements and cost structures. A crucial element of the REACH bill is that there are no cap limits imposed.

My Company has been developing and deploying energy storage systems for nearly a decade and is responsible for some of the largest and most technologically advanced systems in Hawaii. We manufacture our own battery systems in Hawaii, so we have a strong appreciation for how this bill will help our Company grow – bringing skilled, living wage jobs to the Hawaiian economy.

HNU Energy was recognized at the 2011 Asia Pacific Economic Cooperative (APEC) summit for “pioneering and deploying state of the art solar power generating systems and energy storage systems”. We have continued to lead in this sector and are poised to play a key role in ensuring that Hawaii achieves its 100% renewable energy mandate.

Thank you for your consideration of this important bill. It will be a key element of Hawaii leadership in renewable energy policy and achievement, which will be a global model.

Thank you for allowing me to testify in **SUPPORT** of **SB 365**. My contact is: mreiley@hnuenergy.com



Before the Senate Committee on Transportation and Energy
Wednesday, February 15, 2017, 1:20 p.m., Room 225
SB 365: Relating to Energy Storage

Aloha Chair Inouye, Vice Chair Dela Cruz, and members of the Committee,

On behalf of the Distributed Energy Resources Council of Hawaii (“DER Council”), I would like to testify in support of the general intent of SB 365 which establishes tax incentives for energy storage. The amount of the credit ramps down over time, but does not have a cap or any special provision for low income taxpayers. We strongly support the creation of a tax credit or rebate for energy storage, but we believe that SB 660, which allows GEMS to use some funds for a storage rebate, or SB 665, which increases the cap for energy storage to be the better legislative vehicles.

The DER Council is a nonprofit trade organization formed to assist with the development of distributed energy resources and smart grid technologies which will support an affordable, reliable, and sustainable energy supply for Hawaii.

The investment in energy storage is seen as a crucial next step towards the development of a resilient and reliable electrical grid which can accommodate more renewable energy resources and help Hawaii achieve its clean energy goals. Specifically, energy storage contributes to grid modernization in a variety of ways. Energy storage can be utilized to shift peak load and supply capacity, provide many valuable ancillary services such as fast frequency response and regulating reserves¹, delay or offset the need for grid upgrades, and provide energy back-up during emergencies. Distributed energy storage also provides the greatest number of benefits in comparison to other storage technologies, and should be seen as a key driver in Hawaii’s clean energy development.²

In addition, distributed energy storage puts private capital to work through customer investments which provide benefits to all rate payers. Energy storage also helps keep local dollars at home by reducing the need for fossil fuels, reducing federal tax liability through the federal investment tax credit, and by supporting an industry that provides good local green jobs that cannot be outsourced.

¹ See Docket No. 2015-0412 Demand Response Pilot Project currently underway.

² See “The Economics of Battery Energy Storage,” Rocky Mountain Institute October 2015 at 6 where distributed behind the meter battery storage provides 13 grid services—the greatest number of grid services when compared to energy storage located on the distribution and transmission system.

However, the DER Council has been informed that the Hawaii department of Taxation is currently in the process of updating its software system, and we are concerned that these administrative improvements will prevent or unduly delay any new tax incentives.

We therefore encourage legislators to consider SB 660, which allows the GEMS program to use some funds for a storage rebate, or SB 665, which increases the cap for energy storage as the primary vehicle to support the development of energy storage.

Thank you for the opportunity to testify

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



Green Power Projects LLC
Alan Lennard, Managing Director
P.O. Box 818
Haleiwa, HI 96712
T 808.381-3447 F 808.381-0547
E. alan.lennard@greenpowerprojects.com

Alan Lennard
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www.greenpowerprojects.com

Testimony of Alan Lennard
Managing Director of Green Power Projects LLC
e-mail: alan.lennard@greenpowerprojects.com

In SUPPORT of SB 365 RELATING TO ENERGY STORAGE

Before the
SENATE COMMITTEE ON TRANSPORTATION AND ENERGY
Wednesday, February 15, 2017 2:30
Conference Room 225
State Capitol
415 South Beretania Street

Aloha, Chair Inouye, Vice-Chair Dela Cruz 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 SB 365

With the end of new renewable generation that exports power to the grid, Hawaii's most powerful force for achieving 100% renewable energy – its electric power customers (including its electric utilities) – have been taken out of the game.

Hawaii's electric power customers been sidelined without viable options for investing in new renewable generation needed to carry Hawaii to 100% renewable energy.

And because Hawaii's electric power customers have been sidelined, many hundreds of skilled well-paying jobs have been lost in Hawaii's renewable energy industry.

SB 365 provides a tax credit for investment in the energy storage systems that will bring back Hawaii's electric customers (including Hawaii's electric utilities) into Hawaii's markets for new renewable generation. Hawaii electric power customers' investments in energy storage and new renewable generation, incentivized by the proposed tax credit, will bring back hundreds of renewable energy jobs lost during the last 2 years.

Therefore We **SUPPORT** SB 365 – We understand that enactment of SB 365 may come at a cost to the State Treasury in lost tax revenues. To the extent that is a concern, If necessary to proceed with enactment of this bill, we ask the legislature to consider adjusting the tax credit rates in SB 365 as a preferred method for addressing that concern.

REACH SUPPORTS SB 365 to bring Hawaii's electric power customers back into Hawaii's renewable energy markets, and to bring back hundreds of skilled well-paid jobs in Hawaii.

Thank you for allowing me to testify.

Alan Lennard – dig signature

Alan Lennard
Managing Director
Green Power Projects LLC
P.O. Box 818
Haleiwa, HI 96712-0818



Laurence Ponce
Solar Services Hawaii LLP
98-121 Kihale Pl
Aiea, HI 96701
License(s) #C-26234 & #C-26354
(808) 721-3585

Testimony of Laurence Ponce
RME of Solar Services Hawaii
e-mail: solar.services.hi.testimony@gmail.com

In SUPPORT of SB 365 RELATING TO ENERGY STORAGE

Before the
SENATE COMMITTEE ON TRANSPORTATION AND ENERGY
Wednesday, February 15, 2017 2:30
Conference Room 225
State Capitol
415 South Beretania Street

Aloha, Chair Inouye, Vice-Chair Dela Cruz and members of the Committee.

My name is Laurence Ponce. I am RME of Solar Services Hawaii, and a Member of Renewable Energy Action Coalition of Hawaii (REACH). Grand Solar is a Solar installation 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.

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REACH SUPPORTS SB 365 to bring Hawaii's electric power customers back into Hawaii's renewable energy markets, and to bring back hundreds of skilled well-paid jobs in Hawaii.

Thank you for allowing me to testify.

Laurence Ponce – dig signature

Laurence Ponce
Solar Services Hawaii LLP
98-121 Kihale Pl., Aiea, HI 96701
(808) 721-3585
solar.services.hi.testimony@gmail.com



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John Grandinetti
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Testimony of John Grandinetti
President of
e-mail: grandsolar808@gmail.com

In SUPPORT of SB 365 RELATING TO ENERGY STORAGE

Before the
SENATE COMMITTEE ON TRANSPORTATION AND ENERGY
Wednesday, February 15, 2017 2:30
Conference Room 225
State Capitol
415 South Beretania Street

Aloha, Chair Inouye, Vice-Chair Dela Cruz and members of the Committee.

My name is John Grandinetti. I am the President of Grand Solar Inc. and a Member of Renewable Energy Action Coalition of Hawaii (REACH). Grand Solar is a Solar installation 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 SB 365

With the end of new renewable generation that exports power to the grid, Hawaii's most powerful force for achieving 100% renewable energy – its electric power customers (including its electric utilities) – have been taken out of the game.

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Therefore We **SUPPORT** SB 365 – We understand that enactment of SB 365 may come at a cost to the State Treasury in lost tax revenues. To the extent that is a concern, If necessary to proceed with enactment of this bill, we ask the legislature to consider adjusting the tax credit rates in SB 365 as a preferred method for addressing that concern.

REACH SUPPORTS SB 365 to bring Hawaii's electric power customers back into Hawaii's renewable energy markets, and to bring back hundreds of skilled well-paid jobs in Hawaii.

Thank you for allowing me to testify.

John Grandinetti – dig signature

John Grandinetti
President, Grand Solar Inc.
4882-4 Kilauea Ave.
Honolulu, Hawaii 96816
Tel: (808) 737-3536
grandsolar808@gmail.com

Testimony of Paul Spencer
President for Sun King Inc. a Hawaii Corporation
e-mail: solarenergy@sunkinghawaii.biz

In SUPPORT of SB 365 RELATING TO ENERGY STORAGE

Before the
SENATE COMMITTEE ON TRANSPORTATION AND ENERGY

Wednesday, February 15, 2017 1:20 p.m.

Aloha, Chair Inouye, Vice-Chair Dela Cruz and members of the Committee.

My name is Paul Spencer. I am President of Sun King Inc. Sun King was founded on Kauai in 1976. We have been in constant operation since that time. We are also a founding member of the Hawaii Solar Energy Association.

Our company would not have survived 40 years without the support of our Hawaii elected officials.

Although we are a small corporation, we employ 8 full time persons, most with over 20 years as a Sun King employee.

100% renewable energy means energy security, energy resiliency and environmental preservation benefits for all Hawaiians.

We SUPPORT SB 365.

Our jobs and family security has been severely dampened with the end of new renewable generation that exports power to the grid, Hawaii's most powerful force for achieving 100% renewable energy – its electric power customers with roof top solar.

We are worried that larger interests override the consumer and the local contractor.

SB 365 provides a tax credit for investment in the energy storage systems that will bring back Hawaii's electric customers (including Hawaii's electric utilities) into Hawaii's markets for new renewable generation. Hawaii electric power customers' investments in energy storage and new renewable generation, incentivized by the proposed tax credit, will bring back hundreds of renewable energy jobs lost during the last 2 years.

Thank you for allowing me to testify in **SUPPORT** of **SB 365**.

Paul Spencer



we make life better®

Senator Lorraine Inouye
Chair, Senate Committee on Transportation and Energy
Hawaii State Legislature
415 South Beretania Street
Honolulu, Hawaii 96813

Senator Inouye,

On behalf of the Air-Conditioning, Heating, and Refrigeration Institute (AHRI), I would like to express our gratitude for the opportunity to provide written testimony on SB 361 & SB 365 relating to Energy Storage.

AHRI is the trade association representing manufacturers of HVACR and water heating equipment within the global industry. AHRI's 300+ member companies manufacture quality, efficient, and innovative residential and commercial air conditioning, space heating, water heating, and commercial refrigeration equipment and components for sale in North America and around the world.

Our members also produce energy storage systems that would be eligible for tax incentives under SB 361 & SB 365. Our members' energy storage systems are an excellent source of efficient energy that can help Hawaii meet its renewable energy goals.

While AHRI supports the premise behind SB 361 & SB 365, we believe the measures can be improved through an amendment to the definition of "energy storage system" included in the legislation. The specific definition can be enhanced to include language that would allow the Hawaii State Energy Office the ability to add technologies as they become commercially available and appropriate for credits. This would save the trouble of re-legislating the list of approved technologies, while also allowing for new and improved technologies to be used for energy savings in the future.

AHRI supports the overall concept behind SB 361 and SB 365, but also supports the adoption of the suggested amendment above. If you have any questions, please do not hesitate to contact me through email at gmcguire@ahrinet.org or by phone at (703) 600-0312.

Best regards,

A handwritten signature in black ink, appearing to read "Garrett McGuire". The signature is fluid and cursive.

Garrett McGuire
Director, Government Relations



68-3765 MANA HUA PL. WAIKOLOA, HI. 96738
MAIN: (808)883-9411 CELL:989-1637 EMAIL:
WWW.ENERGYRESEARCHSYSTEMS.COM

TESTIMONY OF JOHN CROUCH ON BEHALF OF ERS, A RENEWABLE ENERGY COMPANY
BASED IN HAWAII, BEFORE THE
SENATE COMMITTEE ON TRANSPORTATION AND ENERGY

In SUPPORT of SB 365 RELATING TO ENERGY STORAGE

Wednesday, February 15, 2017 2:30 P.M. Conference Room 225

Aloha, Senator Lorraine R. Inouye, Chair: Senator Donovan M. Dela Crus, Vice Chair and members of the Committee, my name is John Crouch. I have been involved in the design and installation of renewable energy projects in Hawaii since the first large unit at Mauna Lani Bay Hotel and Bungalows in 1998 and the first large scale PV project in Hawaii, 2008, on Lana'i composed of 1.5MW of PV to supply 30% of the daytime load.

ERS is in **SUPPORT** of **SB 365**.

The inclusion of "Storage" into the tax credit legislation is essential to further promotion of the use of renewables in meeting our State goals of electrical self-sufficiency. We have made exceptional strides in the establishment of PV and Wind as viable replacements of fossil fuels by providing tax credit incentives to encourage private investment in the renewable energy industry.

We need to expand on the use of renewables by providing similar tax credit incentives for the storage component of reaching our State energy goals.

This bill will clarify that "Storage" qualifies for State tax credits.

SB 365 – Is important as a tool to help us reach our goals of energy security sooner than later.

Thank you for allowing me to testify.

X

John Crouch
President

From: mailinglist@capitol.hawaii.gov
Sent: Friday, February 10, 2017 3:54 PM
To: TRE Testimony
Cc: Heigansen@greenpath-tech.com
Subject: Submitted testimony for SB365 on Feb 15, 2017 14:30PM

SB365

Submitted on: 2/10/2017

Testimony for TRE on Feb 15, 2017 14:30PM in Conference Room 225

Submitted By	Organization	Testifier Position	Present at Hearing
Heigansen Palaita	GreenPath Technologies Inc.	Support	No

Comments: I SUPPORT SB365 !

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

Written Testimony of Myron K. Thompson
President of Solar Cool Hawaii
e-mail: myron@solarcoolhi.com

In SUPPORT of SB 365 RELATING TO ENERGY STORAGE

Before the
SENATE COMMITTEE ON TRANSPORTATION AND ENERGY

Wednesday, February 15, 2017 1:20 p.m.

Aloha, Chair Inouye, Vice-Chair Dela Cruz and members of the Committee.

My name is Myron K. Thompson. I am the President of Solar Cool Hawaii, and have been in the renewable industry in Hawaii for the last 20 years.

I fully **SUPPORT SB 365**.

I have been through the ups and downs in the renewable industry since I started, and know firsthand what our industry means to Hawaii and as a result, the world as well. The reason being that we, in Hawaii, are looked upon by others as the testing grounds for innovation and renewable support. We need to continue!

SB 365 provides a tax credit for investment in the energy storage systems that will bring back Hawaii's electric customers (including Hawaii's electric utilities) into Hawaii's markets for new renewable generation. Hawaii electric power customers' investments in energy storage and new renewable generation, incentivized by the proposed tax credit, will bring back hundreds of renewable energy jobs lost during the last 2 years.

I understand that enactment of **SB 365** may come at a cost to the State Treasury in lost tax revenues. To the extent that is a concern, I invite the legislature to consider adjusting the tax credit rates in **SB 365** as a preferred method for addressing that concern.

I **SUPPORTS SB 365** to bring Hawaii's electric power customers back into Hawaii's renewable energy markets, and to bring back hundreds of skilled well-paid jobs in Hawaii.

Thank you for allowing me to testify in **SUPPORT** of **SB 365**.

Mahalo, Myron K. Thompson



February 14, 2017

Senator Lorriane R. Inouye, Chair
Senator Donovan M. Dela Cruz, Vice Chair
Committee on Transportation and Energy

Re: Testimony on SB 365 (Relating to Energy Storage)
Wednesday, Feb. 15, 2017 @ 2:30 p.m.; Conference Room 225, State Capitol

Purpose: Amber Kinetics, developer of the first utility-scale flywheel, supports a tax credit for energy storage properties. Amber supports a comprehensive definition of “energy storage system” that includes mechanical energy storage.

Amber Kinetics and Flywheel Energy Storage Technology

Amber Kinetics is a California based company that has developed the first utility-scale flywheel capable of providing safe, cost-effective, four hour discharge duration energy storage to supply both capacity and ancillary services to help meet Hawaii’s renewable energy goals.

Hawaii is leading the nation with its goal of 100 percent renewable energy for electricity by 2045. We commend and support the legislature’s commitment to advancing this goal through initiatives that support renewable energy technology.

Amber Kinetics’ technology can store renewable energy for optimal dispatch, replace or defer fossil fuel peaking generation or transmission, avoid distribution upgrades, and increase the overall reliability of the grid.

Amber’s flywheel storage system acts as a mechanical battery. The storage system helps make renewable energy, such as solar, which changes its output according to the weather, be more consistent. This mechanical form of energy storage also has a number of distinct advantages relative to other storage technologies such as chemical batteries. These include unlimited cycling, no degradation, no fire risk, and no hazardous material storage or disposal needs. Our company has been awarded a 20 MW/80 MWh Energy Services Agreement with PG&E for a project in California, and has commercial units operating in the Philippines.

Amber Flywheel Demonstration Project at Campbell Industrial Park

Amber welcomes the opportunity to expand the use of our technology in Hawaii to help the State achieve its laudable renewable energy goals. In 2016, Amber and HECO signed an



agreement to install an Amber flywheel at Campbell Industrial Park as a demonstration project. The flywheel is expected to be in full operation this year. Previously, we were selected for grant funding by the Hawaii-based Energy Excelerator, which is helping fund the HECO demonstration.

Comments

Amber supports tax credit programs that increase the availability of energy storage. The integration of energy storage technology is essential for Hawaii to meet its renewable energy goals. Providing for an income tax credit for taxpayers who purchase and install eligible energy storage systems would incentivize growth of an essential component of the green energy infrastructure.

Amber supports SB 365's definition of "energy storage property" insofar as it encompasses Amber's flywheel storage technology as "equipment that receives, stores, and delivers energy". If this definition is expanded or modified to describe energy storage technologies, Amber recommends that the definition include mechanical energy storage.

Thank you for the opportunity to comment on this bill.

Sincerely,

A handwritten signature in black ink, appearing to read 'Bill Barnes', is written over a light blue horizontal line.

Bill Barnes
Managing Director, Development



Email: communications@ulupono.com

SENATE COMMITTEE ON TRANSPORTATION & ENERGY
Wednesday, February 15, 2017 — 2:30 p.m. — Room 225

Ulupono Initiative Opposes SB 365 with Amendments, Relating to Renewable Energy

Dear Chair Inouye, Vice Chair Dela Cruz, and Members of the Committee:

My name is Kyle Datta and I am General Partner of 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 produced food; increase affordable, clean, renewable energy; and reduce waste. Ulupono believes that self-sufficiency is essential to our future prosperity and will help shape a future where economic progress and mission-focused impact can work hand in hand.

In considering the alternatives for energy storage tax credits, Ulupono applies the following principles to all of the energy storage bills being addressed today:

Renewable Energy Subsidies:

- Subsidies should be used to accelerate the market penetration of energy technologies that are critically important to electric system operations, where large scale adoption of these technologies would lower the risk adjusted rates to all ratepayers
- Subsidies should have defined sunset dates set to the expected point at which the renewable technologies are cost effective without the subsidies.
- If no clear sunset date has been set, subsidies should ramp down to allow the smaller, typically local companies time to adapt, and to prevent the precipitous loss of jobs.
- Subsidies should benefit those who have provided the source of funds used to provide the subsidies, whether these be taxpayer or ratepayer funds
- To that end, funds approved by the public, capital markets, and the Legislature for other purposes should not be used for subsidies, if these subsidies do not serve the same purpose

Investing in a Sustainable Hawai'i

Budget Considerations

- Renewable energy subsidies should have a total annual cap to ensure the State budget exposure is managed or attempt to be fiscally neutral (ramp down other program to pay for new program)
- This cap can be extended for maximum benefit by focusing subsidies on customer sided energy storage for two reasons:
 - First, distributed photovoltaic systems coupled with energy storage enable “smart export” which eliminates over supply in the daytime peak hours and provides dispatch capable energy and reduces or eliminates the need for costly grid upgrades including utility scale storage. Based on the most recent Power Supply Improvement Plan, *this could save ratepayers billions of dollars.*
 - When the utility or an independent power producer installs a battery on the grid, they receive the tax credits and all ratepayers pay for the remaining costs of the battery. Given the cap on the state tax credit for commercial property and assume that the net, combined effect of the federal and state tax credit is 40 percent, ratepayers will pay for 60 percent of the battery. The majority of batteries are used for load shifting and some for regulation. The utility scale batteries will often only be partially utilized.

When a residential customer puts in a battery, he/she will receive a combined 55 percent federal and state tax credit (assuming it falls within the cap) and they personally pay for the difference. If the customers provide load shifting or regulation services to the grid, they are only paid for the value to the grid of the services. Therefore, all ratepayers pay far less for grid services than they would have otherwise paid if the utility had bought the battery, because, in essence, the customer absorbs the cost of the under-utilization.

- Maximization of federal subsidies for the benefit of the state should occur before these subsidies are phased out in five years. Therefore, state energy storage subsidies should start immediately.
- Cognizant of the Department of Taxation reorganization, the definition of energy storage subsidies should fit within the current Department of Taxation schemes to the maximum extent possible.

Ulupono opposes SB 365, which creates tax credits for energy storage, because it is too

costly for the State.

This bill does not align with the criteria enumerated above (see attached table). In an attempt to make this bill more fiscally neutral for the State, there are several changes to SB 365 that we recommend:

- 1) The bill should have a sunset date, we would recommend expiration at 2035 based on the technology cost projections by National Renewable Energy Lab, which indicate subsidies should no longer be needed at that point.
- 2) The bill should have tax credit caps per system.
- 3) Ramp down the RETITC to achieve State budget impact neutrality.

Our financial analysis, based on the projections of new solar in the Hawaiian Electric Companies' most recent Power Supply Improvement Plans provides an indication of the total net cost exposure (incomplete because it does not cover Kaua'i). One of the biggest impacts to the State's budget is the usage of this credit by residential or commercial customers. Greater residential adoption would increase the fiscal deficit to the State because currently many residential customers use the existing tax credit in full. If residential uptake accounts for 50 percent of the new solar/storage, the net impact through 2025 would be an increase of \$165 – 277 million in new State expenditures, not including the existing RETITC for solar. When added to the RETITC for solar, this could bring the total cost for supporting of renewable technology to nearly \$929 million. While we appreciate the generosity, we believe this is excessive and will cause revamping of the tax credit in the near future. We caution these numbers are only indicative of the important levers that can impact the overall State budget exposure.

As Hawai'i's energy issues become more complex and challenging, we appreciate this committee's efforts to look at policies that support renewable energy production.

Thank you for this opportunity to testify.

Respectfully,

Kyle Datta
General Partner

	SB 361	SB 365	SB 665	SE
Accelerate technology	Yes	Yes	Yes	
Defined sunset dates	No	No	No	
Ramp Down	Yes	No	Yes	
Benefit those who provided the funds	Yes	Yes	Yes	
Appropriate use of funds	Yes	Yes	Yes	
Annual total cap or fiscally neutral	No	No	Yes	
Focused on distributed scale	No	No	Yes	
Maximizes Federal Subsidies	Yes	Yes	Yes	
Fits within DOTAX capabilities	No	No	Yes	

From: mailinglist@capitol.hawaii.gov
Sent: Wednesday, February 8, 2017 1:21 PM
To: TRE Testimony
Cc: wrokinslow@gmail.com
Subject: Submitted testimony for SB365 on Feb 15, 2017 13:20PM

SB365

Submitted on: 2/8/2017

Testimony for TRE on Feb 15, 2017 13:20PM in Conference Room 225

Submitted By	Organization	Testifier Position	Present at Hearing
R. Kinslow	Individual	Support	No

Comments: Using incentives such as the proposed tax credit, could bring back hundreds of renewable energy jobs depleted in the last 2 years.

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From: mailinglist@capitol.hawaii.gov
Sent: Friday, February 10, 2017 9:05 AM
To: TRE Testimony
Cc: dtewabeach@gmail.com
Subject: Submitted testimony for SB365 on Feb 15, 2017 13:20PM

SB365

Submitted on: 2/10/2017

Testimony for TRE on Feb 15, 2017 13:20PM in Conference Room 225

Submitted By	Organization	Testifier Position	Present at Hearing
David Thompson	Individual	Support	No

Comments: Please make sure this bill goes through. Without tax credit, Battery Storage/ Back up is just too expensive. Batteries coupled with PV should get tax credit. This will help Hawaii meet it's renewable energy goals.

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From: mailinglist@capitol.hawaii.gov
Sent: Friday, February 10, 2017 7:37 AM
To: TRE Testimony
Cc: georgecattermole1@gmail.com
Subject: Submitted testimony for SB365 on Feb 15, 2017 13:20PM

SB365

Submitted on: 2/10/2017

Testimony for TRE on Feb 15, 2017 13:20PM in Conference Room 225

Submitted By	Organization	Testifier Position	Present at Hearing
George Cattermole	Individual	Support	No

Comments: SB365 may initially reduce tax revenues, but by bringing in more people and providing incentives for them to contribute to reaching our State's mandated goal of reaching an economy run on 100% renewables, it will create jobs and wealth that will eventually increase tax revenues. The more renewable energy created at a lesser cost than fossil fuel energy, the more money customers will have to spend on other services and goods - money that will stay in Hawaii. Storage is the key to reaching our goal and should be encouraged.

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Testimony of BLAINE BANKS
Director of Renewable Energy Action Coalition of Hawaii
e-mail: brbanks@hotmail.com

In SUPPORT of SB 365 RELATING TO ENERGY STORAGE

Before the
SENATE COMMITTEE ON TRANSPORTATION AND ENERGY

Wednesday, February 15, 2017 1:20 p.m.

Aloha, Chair Inouye, Vice-Chair Dela Cruz and members of the Committee.

My name is Blaine Banks. I am a windward resident who is employed in the renewable and energy conservation field. I am testifying on behalf of myself as a citizen, neighbor, father, and someone who is keenly aware of the benefits of the renewable energy here in Hawaii.

As we have witnessed, the past support of the solar PV renewable tax credit provided benefits not only from all of the jobs in the industry, but also in the long lasting clean energy that is now being produced on so many rooftops and in so many fields all over the state.

This has positively impacted the communities I live in by giving people a sense of being connection to the energy that they consume. It also has employed so many of my neighbors, allowing them to provide good paychecks for their families.

With that being said, I believe that ENERGY STORAGE is the next logical step toward hitting our renewable energy goals of the future. The benefits are numerous, but here are a few highlights:

- Re-employ the skilled workforce already in place which has been cut by lack of residential solar PV work.
- Push Hawaii forward on our renewable goals even though bureaucracy at HECO and the PUC attempt to slow the process down.
- More dependable source of available power; less affected by cloud cover.
- Integrates well with existing solar PV systems.
- Would allow home and business owners to optimize their solar PV systems.
- Creates more favorable distributed generation resources.
- Would allow for a more effective Demand Response program, if implemented.

I appreciate your consideration of my testimony in **SUPPORT** of **SB 365**.

From: mailinglist@capitol.hawaii.gov
Sent: Thursday, February 9, 2017 1:48 PM
To: TRE Testimony
Cc: roy8820@yahoo.com
Subject: Submitted testimony for SB365 on Feb 15, 2017 13:20PM

SB365

Submitted on: 2/9/2017

Testimony for TRE on Feb 15, 2017 13:20PM in Conference Room 225

Submitted By	Organization	Testifier Position	Present at Hearing
Roy Skaggs	Individual	Support	No

Comments: Aloha, Chair Inouye, Vice-Chair Dela Cruz and members of the Committee. My name is Roy Skaggs and I am a writing in my support of SB365. 100% renewable energy means energy security, energy resiliency and environmental preservation benefits for all Hawaiians. With the end of new renewable generation that exports power to the grid, Hawaii's most powerful force for achieving 100% renewable energy – its electric power customers (including its electric utilities) – have been taken out of the game. Hawaii's electric power customers been sidelined without viable options for investing in new renewable generation needed to carry Hawaii to 100% renewable energy. And because Hawaii's electric power customers have been sidelined, many hundreds of skilled well-paying jobs have been lost in Hawaii's renewable energy industry. SB 365 provides a tax credit for investment in the energy storage systems that will bring back Hawaii's electric customers (including Hawaii's electric utilities) into Hawaii's markets for new renewable generation. Hawaii electric power customers' investments in energy storage and new renewable generation, incentivized by the proposed tax credit, will bring back hundreds of renewable energy jobs lost during the last 2 years. To reach our goals and to provide residents more choices, this bill is very important. Thank you for your consideration. Roy Skaggs

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From: mailinglist@capitol.hawaii.gov
Sent: Thursday, February 9, 2017 10:07 AM
To: TRE Testimony
Cc: Charles@risingsunsolar.com
Subject: Submitted testimony for SB365 on Feb 15, 2017 13:20PM

SB365

Submitted on: 2/9/2017

Testimony for TRE on Feb 15, 2017 13:20PM in Conference Room 225

Submitted By	Organization	Testifier Position	Present at Hearing
Charles WL Moore	Individual	Support	No

Comments: With the end of new renewable generation that exports power to the grid, Hawaii's most powerful force for achieving 100% renewable energy – its electric power customers (including its electric utilities) – have been taken out of the game. Hawaii's electric power customers been sidelined without viable options for investing in new renewable generation needed to carry Hawaii to 100% renewable energy. And because Hawaii's electric power customers have been sidelined, many hundreds of skilled well-paying jobs have been lost in Hawaii's renewable energy industry. SB 365 provides a tax credit for investment in the energy storage systems that will bring back Hawaii's electric customers (including Hawaii's electric utilities) into Hawaii's markets for new renewable generation. Hawaii electric power customers' investments in energy storage and new renewable generation, incentivized by the proposed tax credit, will bring back hundreds of renewable energy jobs lost during the last 2 years.

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From: mailinglist@capitol.hawaii.gov
Sent: Tuesday, February 7, 2017 6:51 PM
To: TRE Testimony
Cc: mendezj@hawaii.edu
Subject: *Submitted testimony for SB365 on Feb 15, 2017 13:20PM*

SB365

Submitted on: 2/7/2017

Testimony for TRE on Feb 15, 2017 13:20PM in Conference Room 225

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

Comments:

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From: mailinglist@capitol.hawaii.gov
Sent: Sunday, February 12, 2017 1:47 PM
To: TRE Testimony
Cc: erica.dahl@vivintsolar.com
Subject: Submitted testimony for SB365 on Feb 15, 2017 14:30PM

SB365

Submitted on: 2/12/2017

Testimony for TRE on Feb 15, 2017 14:30PM in Conference Room 225

Submitted By	Organization	Testifier Position	Present at Hearing
Erica Dahl	Vivint Solar	Support	No

Comments: Testimony of Thomas Plagemann Chief Commercial Officer, Vivint Solar e-mail: thomas.plagemann@vivintsolar.com In SUPPORT of SB 365 RELATING TO ENERGY STORAGE Before the SENATE COMMITTEE ON TRANSPORTATION AND ENERGY Wednesday, February 15, 2017 1:20 p.m. Aloha, Chair Inouye, Vice-Chair Dela Cruz and members of the Committee. My name is Thomas Plagemann. I am the Chief Commercial Officer for Vivint Solar. Vivint Solar primarily offers solar energy to residential customers through long-term customer contracts, such as power purchase agreements and solar energy system leases. Vivint Solar also offers customers the option to purchase solar energy systems, which may include energy storage equipment. Vivint Solar SUPPORTS SB 365. With the end of new renewable generation that exports power to the grid, Hawaii's electric power customers are limited in their ability to make financially sound investments in new renewable energy generation equipment. As a direct result of this, many hundreds of skilled well-paying jobs have been lost in Hawaii's renewable energy industry. SB 365 provides a tax credit for investment in the energy storage systems that will bring back Hawaii's electric customers (including Hawaii's electric utilities) into Hawaii's markets for new renewable generation. Hawaii electric power customers' investments in energy storage and new renewable generation, incentivized by the proposed tax credit, will bring back hundreds of renewable energy jobs lost during the last 2 years. Vivint Solar understands that enactment of SB 365 may come at a cost to the State Treasury in foregone tax revenues, although this cost should be mitigated by increased payroll, income, and general excise tax collections due to the jumpstart SB 365 will have on Hawaii's economy. To the extent the cost of SB 365 is a concern, Vivint Solar invites the Legislature to consider adjusting the tax credit rates in SB 365 as a preferred method for addressing that concern. Vivint Solar SUPPORTS SB 365 to bring Hawaii's electric power customers back into Hawaii's renewable energy markets and to bring back hundreds of skilled well-paying jobs to Hawaii. Thank you for allowing me to testify in SUPPORT of SB 365.

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the committee prior to the convening of the public hearing.

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To: The Honorable Lorraine Inouye, Chair
Donovan Dela Cruz, Vice Chair
and members of the Senate Committee on Transportation and Energy

Date: February 15, 2017

Time: 2:30 P.M.

Place Conference Room 225, State Capitol

From: Mark Ida
Resident and Voter

Position: **Support**

Re: S.B. 365, Energy Storage System Tax Credit

Of all the energy storage tax credit bills introduced this year, SB 365 is the most sound of all. It should be passed "as is".

Thank you for the opportunity to provide comments.

Testimony of Robles D.Arca
PV Design Engineer of Greenpath Technologies Inc
e-mail: robles@greenpath-tech.com

In SUPPORT of SB 365 RELATING TO ENERGY STORAGE

Before the
SENATE COMMITTEE ON TRANSPORTATION AND ENERGY

Wednesday, February 15, 2017 1:20 p.m.

Aloha, Chair Inouye, Vice-Chair Dela Cruz and members of the Committee.

My name is Robles Arca. I am a PV Design Engineer of Greenpath Technologies Inc (GPT). GPT is a solar power contractor whose vision is a Hawaiian energy economy based 100% on renewable sources indigenous to Hawaii.

100% renewable energy means energy security, energy resiliency and environmental preservation benefits for all Hawaiians.

GPT SUPPORTS SB 365.

With the end of new renewable generation that exports power to the grid, Hawaii's most powerful force for achieving 100% renewable energy – its electric power customers (including its electric utilities) – have been taken out of the game.

Hawaii's electric power customers been sidelined without viable options for investing in new renewable generation needed to carry Hawaii to 100% renewable energy.

And because Hawaii's electric power customers have been sidelined, many hundreds of skilled well-paying jobs have been lost in Hawaii's renewable energy industry.

SB 365 provides a tax credit for investment in the energy storage systems that will bring back Hawaii's electric customers (including Hawaii's electric utilities) into Hawaii's markets for new renewable generation. Hawaii electric power customers' investments in energy storage and new renewable generation, incentivized by the proposed tax credit, will bring back hundreds of renewable energy jobs lost during the last 2 years.

GPT SUPPORTS SB 365 to bring Hawaii's electric power customers back into Hawaii's renewable energy markets, and to bring back hundreds of skilled well-paid jobs in Hawaii.

Thank you for allowing me to testify in **SUPPORT** of **SB 365**.

From: mailinglist@capitol.hawaii.gov
Sent: Monday, February 13, 2017 7:14 AM
To: TRE Testimony
Cc: michelle@greenpath-tech.com
Subject: Submitted testimony for SB365 on Feb 15, 2017 14:30PM

SB365

Submitted on: 2/13/2017

Testimony for TRE on Feb 15, 2017 14:30PM in Conference Room 225

Submitted By	Organization	Testifier Position	Present at Hearing
Michelle Takumi	Individual	Support	No

Comments: Testimony of MICHELLE TAKUMI In SUPPORT of SB 365 RELATING TO ENERGY STORAGE Before the SENATE COMMITTEE ON TRANSPORTATION AND ENERGY Wednesday, February 15, 2017 1:20 p.m. Aloha, Chair Inouye, Vice-Chair Dela Cruz and members of the Committee. My name is Michelle Takumi, administrative assistant for Greenpath Technologies Inc.. 100% renewable energy means energy security, energy resiliency and environmental preservation benefits for all Hawaiians. GPT SUPPORTS SB 365. With the end of new renewable generation that exports power to the grid, Hawaii's most powerful force for achieving 100% renewable energy – its electric power customers (including its electric utilities) – have been taken out of the game. Hawaii's electric power customers been sidelined without viable options for investing in new renewable generation needed to carry Hawaii to 100% renewable energy. And because Hawaii's electric power customers have been sidelined, many hundreds of skilled well-paying jobs have been lost in Hawaii's renewable energy industry. SB 365 provides a tax credit for investment in the energy storage systems that will bring back Hawaii's electric customers (including Hawaii's electric utilities) into Hawaii's markets for new renewable generation. Hawaii electric power customers' investments in energy storage and new renewable generation, incentivized by the proposed tax credit, will bring back hundreds of renewable energy jobs lost during the last 2 years. GPT SUPPORTS SB 365 to bring Hawaii's electric power customers back into Hawaii's renewable energy markets, and to bring back hundreds of skilled well-paid jobs in Hawaii. Thank you for allowing me to testify in SUPPORT of SB 365.

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From: mailinglist@capitol.hawaii.gov
Sent: Monday, February 13, 2017 7:14 AM
To: TRE Testimony
Cc: michelle@greenpath-tech.com
Subject: Submitted testimony for SB365 on Feb 15, 2017 14:30PM

SB365

Submitted on: 2/13/2017

Testimony for TRE on Feb 15, 2017 14:30PM in Conference Room 225

Submitted By	Organization	Testifier Position	Present at Hearing
Michelle Takumi	Individual	Support	No

Comments: Testimony of MICHELLE TAKUMI In SUPPORT of SB 365 RELATING TO ENERGY STORAGE Before the SENATE COMMITTEE ON TRANSPORTATION AND ENERGY Wednesday, February 15, 2017 1:20 p.m. Aloha, Chair Inouye, Vice-Chair Dela Cruz and members of the Committee. My name is Michelle Takumi, administrative assistant for Greenpath Technologies Inc.. 100% renewable energy means energy security, energy resiliency and environmental preservation benefits for all Hawaiians. GPT SUPPORTS SB 365. With the end of new renewable generation that exports power to the grid, Hawaii's most powerful force for achieving 100% renewable energy – its electric power customers (including its electric utilities) – have been taken out of the game. Hawaii's electric power customers been sidelined without viable options for investing in new renewable generation needed to carry Hawaii to 100% renewable energy. And because Hawaii's electric power customers have been sidelined, many hundreds of skilled well-paying jobs have been lost in Hawaii's renewable energy industry. SB 365 provides a tax credit for investment in the energy storage systems that will bring back Hawaii's electric customers (including Hawaii's electric utilities) into Hawaii's markets for new renewable generation. Hawaii electric power customers' investments in energy storage and new renewable generation, incentivized by the proposed tax credit, will bring back hundreds of renewable energy jobs lost during the last 2 years. GPT SUPPORTS SB 365 to bring Hawaii's electric power customers back into Hawaii's renewable energy markets, and to bring back hundreds of skilled well-paid jobs in Hawaii. Thank you for allowing me to testify in SUPPORT of SB 365.

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From: mailinglist@capitol.hawaii.gov
Sent: Friday, February 10, 2017 4:52 PM
To: TRE Testimony
Cc: radfordn@gmail.com
Subject: Submitted testimony for SB365 on Feb 15, 2017 14:30PM

SB365

Submitted on: 2/10/2017

Testimony for TRE on Feb 15, 2017 14:30PM in Conference Room 225

Submitted By	Organization	Testifier Position	Present at Hearing
Radford Nakamura	Individual	Support	No

Comments: 100% renewable energy means energy security, energy resiliency and environmental preservation benefits for all Hawaiians. REACH SUPPORTS SB 365. With the end of new renewable generation that exports power to the grid, Hawaii's most powerful force for achieving 100% renewable energy – its electric power customers (including its electric utilities) – have been taken out of the game. Hawaii's electric power customers been sidelined without viable options for investing in new renewable generation needed to carry Hawaii to 100% renewable energy. And because Hawaii's electric power customers have been sidelined, many hundreds of skilled well-paying jobs have been lost in Hawaii's renewable energy industry. SB 365 provides a tax credit for investment in the energy storage systems that will bring back Hawaii's electric customers (including Hawaii's electric utilities) into Hawaii's markets for new renewable generation. Hawaii electric power customers' investments in energy storage and new renewable generation, incentivized by the proposed tax credit, will bring back hundreds of renewable energy jobs lost during the last 2 years. REACH and its members understand that enactment of SB 365 may come at a cost to the State Treasury in lost tax revenues. To the extent that is a concern, REACH invites the legislature to consider adjusting the tax credit rates in SB 365 as a preferred method for addressing that concern. I SUPPORT SB 365 to bring Hawaii's electric power customers back into Hawaii's renewable energy markets, and to bring back hundreds of skilled well-paid jobs in Hawaii. Thank you for allowing me to testify in SUPPORT of SB 365.

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Testimony of Hanh V Nguyen
Director of Renewable Energy Action Coalition of Hawaii
e-mail: Hanh@alternateenergyhawaii.com

In SUPPORT of SB 365 RELATING TO ENERGY STORAGE

Before the
SENATE COMMITTEE ON TRANSPORTATION AND ENERGY

Wednesday, February 15, 2017 1:20 p.m.

Aloha, Chair Inouye, Vice-Chair Dela Cruz and members of the Committee.

My name is Hanh V Nguyen. I am the Chief Engineer of Alternate Energy Inc. We design and install PV system.

100% renewable energy means energy security, energy resiliency and environmental preservation benefits for all Hawaiians.

REACH SUPPORTS SB 365.

With the end of new renewable generation that exports power to the grid, Hawaii's most powerful force for achieving 100% renewable energy – its electric power customers (including its electric utilities) – have been taken out of the game.

Hawaii's electric power customers been sidelined without viable options for investing in new renewable generation needed to carry Hawaii to 100% renewable energy.

And because Hawaii's electric power customers have been sidelined, many hundreds of skilled well-paying jobs have been lost in Hawaii's renewable energy industry.

SB 365 provides a tax credit for investment in the energy storage systems that will bring back Hawaii's electric customers (including Hawaii's electric utilities) into Hawaii's markets for new renewable generation. Hawaii electric power customers' investments in energy storage and new renewable generation, incentivized by the proposed tax credit, will bring back hundreds of renewable energy jobs lost during the last 2 years.

I understand that enactment of **SB 365** may come at a cost to the State Treasury in lost tax revenues. To the extent that is a concern, I invite the legislature to consider adjusting the tax credit rates in **SB 365** as a preferred method for addressing that concern.

I SUPPORTS SB 365 to bring Hawaii's electric power customers back into Hawaii's renewable energy markets, and to bring back hundreds of skilled well-paid jobs in Hawaii.

Thank you for allowing me to testify in **SUPPORT** of **SB 365**.

Testimony of Miles Yoshimoto
Project Developer for Alternate Energy Inc.
e-mail: miles@alternateenergyhawaii.com

In SUPPORT of SB 365 RELATING TO ENERGY STORAGE

Before the
SENATE COMMITTEE ON TRANSPORTATION AND ENERGY

Wednesday, February 15, 2017 1:20 p.m.

Aloha, Chair Inouye, Vice-Chair Dela Cruz and members of the Committee.

My name is Miles Yoshimoto. I am a Project Developer for Alternate Energy Inc. I strongly support SB 365 to achieve our renewable energy goals, and keep Hawaii on top of the nations leader in renewable energy.

100% renewable energy means energy security, energy resiliency and environmental preservation benefits for all Hawaiians.

REACH SUPPORTS SB 365.

With the end of new renewable generation that exports power to the grid, Hawaii's most powerful force for achieving 100% renewable energy – its electric power customers (including its electric utilities) – have been taken out of the game.

Hawaii's electric power customers been sidelined without viable options for investing in new renewable generation needed to carry Hawaii to 100% renewable energy.

And because Hawaii's electric power customers have been sidelined, many hundreds of skilled well-paying jobs have been lost in Hawaii's renewable energy industry.

SB 365 provides a tax credit for investment in the energy storage systems that will bring back Hawaii's electric customers (including Hawaii's electric utilities) into Hawaii's markets for new renewable generation. Hawaii electric power customers' investments in energy storage and new renewable generation, incentivized by the proposed tax credit, will bring back hundreds of renewable energy jobs lost during the last 2 years.

REACH and its members understand that enactment of **SB 365** may come at a cost to the State Treasury in lost tax revenues. To the extent that is a concern, REACH invites the legislature to consider adjusting the tax credit rates in **SB 365** as a preferred method for addressing that concern.

REACH SUPPORTS SB 365 to bring Hawaii's electric power customers back into Hawaii's renewable energy markets, and to bring back hundreds of skilled well-paid jobs in Hawaii.

Thank you for allowing me to testify in **SUPPORT** of **SB 365**.

**Testimony of FRANK OKAMURA
Independent Contractor Alternate Energy
e-mail: frank@alternateenergyhawaii.com**

In SUPPORT of SB 365 RELATING TO ENERGY STORAGE

**Before the
SENATE COMMITTEE ON TRANSPORTATION AND ENERGY**

Wednesday, February 15, 2017 1:20 p.m.

Aloha, Chair Inouye, Vice-Chair Dela Cruz and members of the Committee.

My name is Frank Okamura. I am an independent contractor for Alternate Energy Inc.

100% renewable energy means energy security, energy resiliency and environmental preservation benefits for all Hawaiians.

REACH SUPPORTS SB 365.

With the end of new renewable generation that exports power to the grid, Hawaii's most powerful force for achieving 100% renewable energy – its electric power customers (including its electric utilities) – have been taken out of the game.

Hawaii's electric power customers been sidelined without viable options for investing in new renewable generation needed to carry Hawaii to 100% renewable energy.

And because Hawaii's electric power customers have been sidelined, many hundreds of skilled well-paying jobs have been lost in Hawaii's renewable energy industry.

SB 365 provides a tax credit for investment in the energy storage systems that will bring back Hawaii's electric customers (including Hawaii's electric utilities) into Hawaii's markets for new renewable generation. Hawaii electric power customers' investments in energy storage and new renewable generation, incentivized by the proposed tax credit, will bring back hundreds of renewable energy jobs lost during the last 2 years.

REACH and its members understand that enactment of **SB 365** may come at a cost to the State Treasury in lost tax revenues. To the extent that is a concern, REACH invites the legislature to consider adjusting the tax credit rates in **SB 365** as a preferred method for addressing that concern.

REACH **SUPPORTS SB 365** to bring Hawaii's electric power customers back into Hawaii's renewable energy markets, and to bring back hundreds of skilled well-paid jobs in Hawaii.

Thank you for allowing me to testify in **SUPPORT** of **SB 365**.

From: mailinglist@capitol.hawaii.gov
Sent: Tuesday, February 14, 2017 11:39 AM
To: TRE Testimony
Cc: ccampa1@msn.com
Subject: Submitted testimony for SB365 on Feb 15, 2017 14:30PM

SB365

Submitted on: 2/14/2017

Testimony for TRE on Feb 15, 2017 14:30PM in Conference Room 225

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

Comments: Many thanks for the opportunity to submit testimony in support of this measure. The pricing of Photovoltaic system have come down over the past several years. In order to achieve the State goal of 100% renewable/clean electricity by 2015, storage will be needed. Therefore, providing an incentive for storage will support the State goals.

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February 15, 2017
Senate Committee on Transportation and Energy
Wednesday, February 15, 2017, 2:30 p.m.
RE: Support of SB361, SB365, and SB665

Dear Chair Inouye, Vice Chair Dela Cruz, and Esteemed Committee Members:

Thank you for the opportunity to submit testimony on this important issue. My name is Sean Aronson and I am a 3rd year law student at Richardson. I believe incentivizing energy storage is vital to ensuring Hawaii achieves the 100% RPS by 2045. That is why I support these three bills as necessary to furthering that goal.

During my time in law school, I have focused on energy law and policy – figuring out ways more people can participate in the energy revolution transforming Hawaii. As it now stands, having the capitol to invest in a solar plus storage system is only likely for a very small section of the population. The State needs to find a way to enable more participation and these bills are a positive step in that direction. By offering tax credits and rebates, energy storage systems will flourish and become more accessible to a greater portion of the population.

These proposed bills, taken together, represent a significant step towards weaning ourselves off of fossil fuels and towards a cleaner energy future. Just as solar credits have been so successful, credits for battery storage will jumpstart an ailing industry. Incentivizing more renewable systems for Hawaii is good for the State and allows us to reach our goals in a democratic fashion.

Under the current system, installing solar panels on homes is no longer as cost-effective as it once was before the retirement of NEM. If tax credits are given for

storage systems, both current solar owners and new owners will be incentivized to make the rather expensive investment in storage systems. An increase in batteries will also make the overall electric system more reliable and safe. Ultimately, it will help HECO if customers are able to control when their solar power is utilized by the overall system.

Only when everyone participates, will it truly be an energy revolution. This is why I urge you to support Senate Bills 361, 365, and 665.

Thank you for your attention to this important matter.

Sean Aronson

From: mailinglist@capitol.hawaii.gov
Sent: Wednesday, February 8, 2017 6:37 PM
To: TRE Testimony
Cc: thomashall@solarspecialtygroup.com
Subject: Submitted testimony for SB365 on Feb 15, 2017 13:20PM

SB365

Submitted on: 2/8/2017

Testimony for TRE on Feb 15, 2017 13:20PM in Conference Room 225

Submitted By	Organization	Testifier Position	Present at Hearing
Thomas Hall	Individual	Comments Only	No

Comments: Aloha, Chair Inouye, Vice-Chair Dela Cruz and members of the Committee. My name is Thomas Hall. I am a Solar Power consultant in Honolulu. I am in support of SB 365 and share similar support with others such as REACH. 100% renewable energy means energy security, energy resiliency and environmental preservation benefits for all Hawaiians. REACH SUPPORTS SB 365. With the end of new renewable generation that exports power to the grid, Hawaii's most powerful force for achieving 100% renewable energy – its electric power customers (including its electric utilities) – have been taken out of the game. Hawaii's electric power customers been sidelined without viable options for investing in new renewable generation needed to carry Hawaii to 100% renewable energy. And because Hawaii's electric power customers have been sidelined, many hundreds of skilled well-paying jobs have been lost in Hawaii's renewable energy industry. SB 365 provides a tax credit for investment in the energy storage systems that will bring back Hawaii's electric customers (including Hawaii's electric utilities) into Hawaii's markets for new renewable generation. Hawaii electric power customers' investments in energy storage and new renewable generation, incentivized by the proposed tax credit, will bring back hundreds of renewable energy jobs lost during the last 2 years. REACH and its members understand that enactment of SB 365 may come at a cost to the State Treasury in lost tax revenues. To the extent that is a concern, REACH invites the legislature to consider adjusting the tax credit rates in SB 365 as a preferred method for addressing that concern. REACH SUPPORTS SB 365 to bring Hawaii's electric power customers back into Hawaii's renewable energy markets, and to bring back hundreds of skilled well-paid jobs in Hawaii. Thank you for allowing me to testify in SUPPORT of SB 365.

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From: mailinglist@capitol.hawaii.gov
Sent: Friday, February 10, 2017 12:56 PM
To: TRE Testimony
Cc: craig@alternateenergyhawaii.com
Subject: Submitted testimony for SB365 on Feb 15, 2017 13:20PM

SB365

Submitted on: 2/10/2017

Testimony for TRE on Feb 15, 2017 13:20PM in Conference Room 225

Submitted By	Organization	Testifier Position	Present at Hearing
Craig Kawamura	Individual	Comments Only	No

Comments: Aloha, Chair Inouye, Vice-Chair Dela Cruz 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. 100% renewable energy means energy security, energy resiliency and environmental preservation benefits for all Hawaiians. REACH SUPPORTS SB 365. With the end of new renewable generation that exports power to the grid, Hawaii's most powerful force for achieving 100% renewable energy – its electric power customers (including its electric utilities) – have been taken out of the game. Hawaii's electric power customers been sidelined without viable options for investing in new renewable generation needed to carry Hawaii to 100% renewable energy. And because Hawaii's electric power customers have been sidelined, many hundreds of skilled well-paying jobs have been lost in Hawaii's renewable energy industry. SB 365 provides a tax credit for investment in the energy storage systems that will bring back Hawaii's electric customers (including Hawaii's electric utilities) into Hawaii's markets for new renewable generation. Hawaii electric power customers' investments in energy storage and new renewable generation, incentivized by the proposed tax credit, will bring back hundreds of renewable energy jobs lost during the last 2 years. REACH and its members understand that enactment of SB 365 may come at a cost to the State Treasury in lost tax revenues. To the extent that is a concern, REACH invites the legislature to consider adjusting the tax credit rates in SB 365 as a preferred method for addressing that concern. REACH SUPPORTS SB 365 to bring Hawaii's electric power customers back into Hawaii's renewable energy markets, and to bring back hundreds of skilled well-paid jobs in Hawaii. Thank you for allowing me to testify in SUPPORT of SB 365.

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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