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

To: The Honorable Angus L.K, McKelvey, Chair and Members of the House Committee on Consumer Protection and Commerce

Date:Wednesday, February 18, 2015Time:3:00 P.M.Place:Conference Room 325, State Capitol

From: Maria E. Zielinski, Director Department of Taxation

Re: H.B.265, H.D. 1, Relating to Energy Storage

The Department of Taxation (Department) appreciates the intent of H.B. 265, H.D. 1 and offers the following comments.

H.B. 265, H.D. 1 creates an income tax credit for grid-connected energy storage systems. The tax credit may be claimed either as an investment credit or a utilization credit, for unspecified percentages of the basis of the equipment or an unspecified number of cents per kilowatt-hour of storage capacity, respectively. The credit is available for tax years beginning after December 31, 2015 and not available for tax years beginning after December 31, 2026, but is available at different rates at different time periods within that time frame. The credit is refundable if the taxpayer elects to reduce the credit amount by thirty percent.

The Department notes that the grid-connected energy storage property described in H.B. 265, H.D. 1 already qualifies as an accessory under the renewable energy technologies income tax credit provided by section 235-12.5, Hawaii Revised Statutes, if installed with the energy-producing portion of the system. The Department additionally notes that multiple methods of computing the tax credit will cause unnecessary confusion for taxpayers and difficulty in administration of the credit, and suggests that one method for calculation of the credit be chosen.

The Department additionally notes that it lacks the expertise necessary to evaluate a claim for credit based on utilization, making enforcement and compliance very difficult. The Department suggests a pre-certification procedure for claiming the tax credit, to be verified by a State agency with the technical expertise necessary to determine whether the equipment installed is the type the State wishes to incentivize with this credit.

Department of Taxation Testimony CPC HB 265 HD 1 February 18, 2015 Page 2 of 2

As noted above, this tax credit is refundable if the taxpayer elects to reduce the credit amount by thirty percent. The Department prefers non-refundable tax credits, which are less problematic to administer and promote compliance.

Thank you for the opportunity to provide comments.



DAVID Y. IGE GOVERNOR

SHAN S. TSUTSUI LT. GOVERNOR STATE OF HAWAII OFFICE OF THE DIRECTOR DEPARTMENT OF COMMERCE AND CONSUMER AFFAIRS

> 335 MERCHANT STREET, ROOM 310 P.O. Box 541 HONOLULU, HAWAII 96809 Phone Number: 586-2850 Fax Number: 586-2856 www.hawaii.gov/dcca

#### TO THE HOUSE COMMITTEE ON CONSUMER PROTECTION & COMMERCE

#### THE TWENTY-EIGHTH LEGISLATURE REGULAR SESSION OF 2015

#### WEDNESDAY, FEBRUARY 18, 2015 3:00 p.m.

#### TESTIMONY OF JEFFREY T. ONO, EXECUTIVE DIRECTOR, DIVISION OF CONSUMER ADVOCACY, DEPARTMENT OF COMMERCE AND CONSUMER AFFAIRS, TO THE HONORABLE ANGUS L.K. McKELVEY, CHAIR, AND MEMBERS OF THE COMMITTEE

HOUSE BILL NO. 265, H.D. 1 - RELATING TO ENERGY STORAGE

#### **DESCRIPTION:**

This measure proposes to establish an investment- or utilization-based income tax credit for each grid-connected energy storage properties installed and placed in service after December 31, 2015 and expires in taxable years beginning after December 31, 2026. The bill also appropriates funds to administer the tax credit.

#### POSITION:

The Division of Consumer Advocacy offers comments to this bill.

#### COMMENTS:

This bill provides for various tax credits to Hawaii taxpayers who install large (1 megawatt or greater) energy storage systems that are grid-connected. Batteries and other storage devices have the potential to provide significant ancillary services to the grid that help smooth out the variability of most renewable energy technologies.

CATHERINE P. AWAKUNI COLÓN DIRECTOR

JO ANN M. UCHIDA TAKEUCHI DEPUTY DIRECTOR House Bill No. 265, H.D. 1 House Committee on Consumer Protection & Commerce Wednesday, February 18, 2015, 3:00 p.m. Page 2

The Consumer Advocate appreciates the Legislature's desire to provide a tax credit to taxpayers who purchase and install energy storage systems that are "grid connected." A storage system that is completely disconnected from the grid will not qualify for any of these proposed tax credits. It is not clear whether this measure will allow the use of energy storage tax credits to help purchase systems that are only initially connected to the grid, but are then subsequently disconnected from the grid advantage those tax credits have been once the of exhausted. The Consumer Advocate would ask the Legislature to carefully consider the negative, unfair financial impacts this sort of loophole would have on remaining grid-connected customers who cannot afford energy storage systems even with tax credit assistance.

Finally, the Consumer Advocate recommends a cautious approach to providing tax credits to one particular technology over another. There may be other more cost-effective means of providing ancillary services other than energy storage. For example, demand response programs may be a less costly means of shifting energy demand away from the evening peak. Tax credits tend to create market distortions that may prevent a more balanced, cost-effective portfolio of resources to meet Hawaii's energy needs.

Thank you for this opportunity to testify.

## **ECONOMIC DEVELOPMENT & TOURISM**

No. 1 Capitol District Building, 250 South Hotel Street, 5th Floor, Honolulu, Hawaii 96813 Mailing Address: P.O. Box 2359, Honolulu, Hawaii 96804 Web site: www.hawaii.gov/dbedt

MARY ALICE EVANS DEPUTY DIRECTOR

Telephone: (808) 586-2355 Fax: (808) 586-2377

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

> Wednesday, February 18, 2015 3:00 p.m. State Capitol, Conference Room 325

#### in consideration of HB 265. HD 1 **RELATING TO ENERGY STORAGE.**

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

The Department of Business, Economic Development & Tourism (DBEDT) offers comments on HB 265, HD 1, which creates an investment and utilization tax credit for gridconnected energy storage.

DBEDT appreciates the concept of providing incentives for grid-supportive energy storage, which is aligned with the State's energy policy vision of a creating a modernized, intelligently-networked grid that provides economic, environmental and system benefits in a balanced and equitable manner. We also appreciate the wisdom of providing an explicit limit on the duration of the program.

However, DBEDT urges the Legislature to consider the matter of grid-connected energy storage under a broader utility planning perspective. Specifically, the interconnection of storage systems is currently being reviewed under various interrelated PUC proceedings<sup>1</sup> and

### **DEPARTMENT OF BUSINESS,**

DAVID Y. IGE GOVERNOR LUIS P. SALAVERIA

DIRECTOR

<sup>&</sup>lt;sup>1</sup> Reference Docket No. 2011-0206 Hawaiian Electric, Inc.'s Power Supply Improvement Plan, Docket No. 2012-0212 Hawaii Electric Light Power Supply Improvement Plan, Docket No. 2011-0092 Maui Electric Power Supply Improvement Plan, Docket No. 2014-0192 Instituting a Proceeding to Investigate Distributed Energy Resource Policies, Docket No. 2014-0192 Regarding a Proceeding Investigate Distributed Energy Resource Policies; Docket No. 2014-0130 Hawaiian Electric Companies, Inc. Application For Approval to Modify Rule 14H - Interconnection of Distributed Generating Facilities Operating in Parallel With the Companies' Electric System.

recommendations are either being formulated<sup>2</sup> or have been submitted to the PUC by energy stakeholders. Therefore, we suggest that this measure be held pending an update from DBEDT and other energy stakeholders (at the discretion of the Legislature) later this Legislative Session on the progress of those recommendations.

Regarding the administrative duties of this bill, we defer to the Department of Taxation and suggest that any reporting or data collection program follow the online survey approach developed under Act 270 (13), the Research Activities Tax Credit.

Thank you for the opportunity to offer these comments on HB 265, HD 1.

<sup>&</sup>lt;sup>2</sup> Per regulatory procedure under Docket No. 2014-0130, stakeholder recommendations on the interconnection process of storage systems and related definitions are to be submitted to the PUC by February 19, 2015.

# TAXBILLSERVICE

126 Queen Street, Suite 304

TAX FOUNDATION OF HAWAII

Honolulu, Hawaii 96813 Tel. 536-4587

SUBJECT: INCOME, Grid-connected energy storage tax credit

BILL NUMBER: HB 265, HD-1

INTRODUCED BY: House Committee on Energy and Environmental Protection

EXECUTIVE SUMMARY: This measure allows a tax credit for each grid-connected energy storage property placed into service between 1/1/16 and 12/31/26. The credit could be based on investment basis or storage capacity, at the taxpayer's election. Such property is already eligible for the renewable energy technologies credit under HRS section 235-12.5 on the state level and under IRC section 45 or 48 on the federal level. Adding multiple new mechanisms to claim credits for the same property will be confusing at best, may open up multiple opportunities for abuse, and will be an unspecified drain on the revenue.

BRIEF SUMMARY: Adds a new section to HRS chapter 235 to allow an individual or corporate net income taxpayer to claim an income tax credit for each grid-connected energy storage property that is installed and placed in service during a taxable year after 12/31/15 and shall not be available for tax years beginning after 12/31/26. The tax credit may be claimed in either, but not both, of the following forms:

**Investment credit**: An investment credit equal to: (1) for a grid-connected energy storage property first placed in service on or before 12/31/2021, not more than \_\_\_\_\_% of the basis; or (2) for a grid-connected energy storage property first placed in service after 12/31/2021, and on or before 12/31/2026, not more than \_\_\_\_\_% of the basis; or:

**Utilization credit**: A utilization credit equal to: (1) for a grid-connected energy storage property first placed in service on or before 12/31/2021, \_\_\_\_\_ cents per kilowatt-hour of energy storage capacity; or (2) for a grid-connected energy storage property first placed in service after 12/31/2021, and on or before 12/31/2026, \_\_\_\_\_ cents per kilowatt-hour of energy storage capacity. Permits the utilization credit to be claimed during each of the first ten taxable years that the grid-connected energy storage property is in service; provided that this annual utilization credit shall not exceed the product of the energy storage capacity measured in kilowatt-hours, multiplied by 365, multiplied by the applicable number of cents per kilowatt-hour.

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

#### HB 265, HD-1 - Continued

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

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

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

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

Appropriates \$\_\_\_\_\_ in general funds for fiscal 2016 and 2017 to the department of taxation for the administration of the tax credit, effective July 1, 2015.

EFFECTIVE DATE: Tax years beginning after December 31, 2015

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

Adding this credit, therefore, creates three possibilities for credits for a grid-connected energy storage system: the existing credit that is investment-based; the new investment credit; and the new utilization credit. These multiple possibilities create the very real potential for taxpayer confusion and also provide opportunities for abuse.

We understand that the policy issues presented here are now being considered in a number of PUC proceedings. Lawmakers may wish to consider the results of these proceedings before forging ahead with a credit that has the potential to be a "black hole," draining revenue without limit.

Digested 2/17/15



Email: <a href="mailto:communications@ulupono.com">communications@ulupono.com</a>

#### HOUSE COMMITTEE ON CONSUMER PROTECTION & COMMERCE Wednesday, February 18, 2015 — 3:00 p.m. — Room 325

### Ulupono Initiative <u>Strongly Supports</u> HB 265 <u>with Amendments</u>, Relating to Energy Storage

Dear Chair McKelvey, Vice Chair Woodson, and Members of the Committee:

My name is Murray Clay and I am Managing Partner of the Ulupono Initiative, a Hawai'ibased impact investment company that strives to improve the quality of life for the people of Hawai'i by working toward solutions that create more locally grown food, increase clean, renewable energy, and waste reduction. We believe that self-sufficiency is essential to our future prosperity, and will help shape a future where economic progress and missionfocused impact can work hand in hand.

**Ulupono** <u>strongly supports</u> HB 265 <u>with amendments</u>, which establishes an investment or utilization tax credit for grid-connected energy storage projects. This bill aligns with our goal of producing more clean, renewable energy in Hawai'i.

In recent years Hawai'i has seen significant growth in renewable energy adoption moving the State towards its renewable energy goals. However, interconnection of renewable energy systems has become increasingly problematic. The growth rate in new residential solar PV systems has declined over the past few years. If the existing interconnection problems persist, renewable energy growth will continue to stagnate in Hawai'i. A modern, flexible grid is necessary to maximize renewable energy penetration.

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

We propose the following two amendments, for your consideration:

#### Investing in a Sustainable Hawai'i



- 1) We believe such energy storage devices should also be under a contract with the utility such as demand response program. If a demand response or similar program is not available for energy storage at the time of installation, the owner of the system should be required to sign up for such a program once it becomes available.
- 2) <u>While there will be discussions as to the numbers for the credit, we propose:</u>
  - Investment tax credit: 20% and 15% (on page 2, line 15 and 18 respectively)
  - <u>Utilization tax credit: 8 and 6 cents (on page 3, line 1 and 5 respectively)</u>

We believe these figures above adequately balance incentivizing investment in energy storage but are not overly burdensome to the State's finances.

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

Murray Clay Managing Partner





#### HOUSE COMMITTEE ON CONSUMER PROTECTION AND COMMERCE

February 18, 2015, 3 P.M., Room 325 (Testimony is 3 page long)

#### **TESTIMONY IN SUPPORT OF HB 265**

Aloha Chair McKelvey, Vice-Chair Woodson, and members of the Committee:

The Blue Planet Foundation supports HB 265, to facilitate and encourage the use of renewable energy by incentivizing the use of grid-connected energy storage technologies and systems through a tax credit (that is limited in scope and duration). The proposed investment tax credit or utilization tax credit are intended to promote the use of grid-connected energy storage to address the varying needs of our island electric grids with technologies most applicable to those needs. Energy storage tax incentives are the appropriate and needed tool to enable continued momentum toward Hawaii's independence from fossil fuels.

Energy storage—whether from batteries, pumped hydro, ultra-capacitors, thermal storage, or some other technology—will be an integral part of our island electricity systems. Many of these technologies are evolving rapidly and in the technology development and deployment stage where tax credits can contribute a critical boost to adoption rates, accelerating the benefits to our energy system.

Blue Planet believes HB 265 is a timely and appropriate policy for the reasons described below.

### Incentives for energy storage can accelerate development of a smart grid, increasing reliability and lowering costs to ratepayers

House Bill 265 is intended to support variable energy sources, including wind and solar power, while moderating energy demands during peak hours and facilitating a "smart grid" that is more reliable in order to improve Hawaii's island electricity grids and achieve the state's clean energy future. This measure would help improve the efficiency, versatility and reliability of Hawaii's electric grids, and would offer more affordable energy storage technologies for homes and businesses.

Hawaii's electricity grid needs energy storage to achieve the state's aggressive clean energy goals. To take advantage of distributed and diversified energy like solar and wind and other variable sources of power, the grid has to become smarter and have the capacity to store

electricity. It will resemble today's Internet—where distributed servers both send and receive packets of information—and less like yesterday's commercial television. Such a self-aware, robust smart grid will instantaneously adjust to shifts in wind strength or cloud cover over solar, balancing energy loads on the other side of the wire and drawing on stored energy when needed.

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

A 2013 study<sup>1</sup> conducted by Hawaiian Electric Companies on battery storage on the MECO system demonstrates showed that a 15 MWh battery storage resource effectively reduced the amount of curtailed (i.e. wasted) renewable energy by almost 2 gigawatt hours per year. By reducing curtailment, the amount of renewable energy increased and resulted in a corresponding increase in the ability to reduce the cost of electricity and the amount of fossil fuel use. 2 gigawatt hours of electricity is worth more than \$600,000 at today's energy rates. Incentivizing this solution can help unlock these savings.

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

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

Hawaii's economy needs power that is as dependable as the daily sunrise and sunset. To make full use of all of Hawaii's native energy sources we need the ability to store power for times when the sun isn't shining or the wind isn't blowing. While it's not clear which forms will be most cost effective for each application—fuel cells, pumped water, flywheels, ultra capacitors, batteries, thermal storage—we do know that solutions are evolving rapidly. Consider data storage for computers. In the late 1950s, cutting-edge data storage could store the equivalent of one MP3 file in the space of half a carport. Today, over 12,000 such files fit on a keychain flash

<sup>&</sup>lt;sup>1</sup> Hawaiian Electric Companies 2013 Integrated Resource Planning ("IRP") Report and Action Plan.

drive. We are seeing a similar evolution for power storage, with the cost of battery storage dropping at nearly 8% annually. But at the same time, our high energy prices mean that the sooner we install energy storage, the more ratepayers can benefit.

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

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

Please forward HB 265.

Thank you for the opportunity to testify.

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

#### Testimony before the House Committee on Consumer Protection & Commerce

#### H.B. 265 H.D. 1 – Relating to Energy Storage

Wednesday, February 18, 2015 3:00 PM, Conference Room 325

By Darren Ishimura Manager, Grid Technologies Hawaiian Electric Company

Chair McKelvey, Vice-Chair Woodson, and Members of the Committee:

My name is Darren Ishimura, Manager of Grid Technologies at Hawaiian Electric. I am testifying on behalf of Hawaiian Electric and its subsidiary utilities, Maui Electric and Hawai'i Electric Light (collectively the "Hawaiian Electric Companies").

Hawaiian Electric supports the intent of H.B. 265 H.D. 1, but respectfully offers the following comments:

- Tax credits for energy storage, as funded by ALL taxpayers in the State, should be made available for applications that provide grid reliability benefits and lower project costs (which can result in cost savings) for ALL customers.
- Tax credits for energy storage must not further exacerbate any cost shift situations that unduly favor a subset of customers at the expense of others.
- The bill should clearly define applicable "systems" that qualify for the tax credit to avoid unintended situations, including but not limited to, claims of multiple tax credits or dollar amounts outside the intent or scope of the tax credit.

The above recommendations will create a fair and balanced tax credit that, if managed under a broad and sustainable approach, will help Hawai`i achieve its clean energy future.

Thank you for the opportunity to testify on this measure.



#### Hawaii Solar Energy Association Serving Hawaii Since 1977

Before House Committee on Consumer Protection & Commerce Wednesday, February 18, 2015, 3 p.m., room 325 HB 265 HD 1: Relating to Energy Storage

Aloha Chair McKelvey, Vice Chair Woodson and members of the Committee,

On behalf of the Hawaii Solar Energy Association (HSEA), I would like to testify in <u>strong support</u> for HB 265 HD 1 which establishes an income tax credit for each energy storage property that is installed and placed in service in the State beginning 12/31/2015. HSEA is a non-profit trade organization that has been advocating for solar energy since 1977, with an emphasis on both solar hot water (SHW) and residential and small commercial distributed generation (PV). We currently represent 90 member companies, which employ thousands of local employees working in the solar industry. With 37 years of advocacy behind us, HSEA's goal is to work for a sustainable energy future for all of Hawaii.

#### Energy storage is key to Hawaii's energy future

Energy storage is the missing link that will allow Hawaii to make the best use of our many indigenous resources, and to greatly reduce our dependence upon imported fossil fuels. Hawaii is blessed with an abundance of indigenous energy resources, but we must have the infrastructure in place that will allow us to have energy available when we need it, and the means to ensure that our grid can be maintained in a safe and reliable manner. Unlike other jurisdictions, Hawaii's load and renewable generation do not necessarily occur at the same. This means that excess energy generated from renewable resources is wasted and results in our continued reliance upon fossil fuels to provide energy when renewables are not available. Energy storage fixes this issue, both by providing the means to store excess energy for when we need it, in addition to providing a variety of grid services that would serve to enhance grid reliability and safety for all ratepayers.

#### Energy storage provides many grid benefits

Specifically, the implementation of a robust network of energy storage would provide a variety of grid benefits. First, energy storage would allow excess energy from renewable generation to be shifted for use at peak load—a valuable service that could be provided both by customers with roof top PV and by the utility with community storage installations. In addition, energy storage would serve to off set or reduce the need for grid improvements and upgrades, as energy produced locally could be stored and consumed locally as needed, thus lessening the impact on distribution level infrastructure. Energy storage can and should also play a key role in providing grid services such as voltage and var support on the distribution level, in addition to system wide services such as frequency support and emergency backup.

#### The regulatory structure to investigate grid interactive storage is underway

The regulatory structure is already underway to ensure that energy storage is a key part of our energy plan. In Exhibit A: Commission's Inclinations on the Future of Hawaii's Electric Utilities, the Commission makes multiple references to key role of energy storage in our energy future such, in addition to the opening of Docket No. 2014-0192 (Instituting a Proceeding to Investigate Distributed Energy Resource (DER) Policies) which will investigate the technical, economic, and policy issues associated with DER, including the appropriate structures needed for grid interactive storage technology.

#### HB 265 HD 1 encourages customers to stay connected to the electrical grid

HB 265 HD 1 also has the additional benefit of encouraging customers to remain connected to the electrical grid by providing an incentive only for systems that are grid connected. Although renewable energy installations which are not grid connected have a purpose in the case where electrical service is not available and especially where a housing shortage could be helped by the ability to affordably invest in storage, it is not to the advantage of the utility or the ratepayers for customers to flee the grid and significantly remove load from the system. This bill would send a strong market signal to incentivize systems that are grid connected. These systems would serve as a stepping stone to a modern, interactive grid that makes the most of all of our energy resources.

#### HB 265 is fiscally prudent

HB 265 HD 1 is fiscally prudent and a sound investment in our state's future as we strive to reduce our dependence upon imported fossil fuels. HB 265 HD 1would make the best use of the federal renewable energy investment tax credit which currently provides a 30% federal tax credit for energy storage connected with photovoltaics through 2016. The Hawaii Renewable Energy Investment Tax Credit does allow storage, but the \$5,000 cap would render all but the smallest systems ineligible. Now is the time to make the most of the ITC while we still have it, and it would be a waste not to use the credit to improve our energy infrastructure.

#### Now is the time to act

Energy storage is key to moving forward with our energy future if we wish to rid the state of our dependence upon imported fossil fuels, and now is the time to act to make best use of the resources at hand.

Thank you for the opportunity to testify

Leslie Cole-Brooks Executive Director Hawaii Solar Energy Association