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To: The Honorable Jill N. Tokuda, Chair
and Members of the Senate Committee on Ways and Means

Date: Monday, February 27, 2017
Time: 9:30 A.M.
Place: Conference Room 211, State Capitol

From: Maria E. Zielinski, Director
Department of Taxation

Re: S.B. 665, S.D. 1, Relating to Renewable Energy

The Department of Taxation (Department) appreciates the intent of S.B. 665, S.D. 1, and provides the following comments for your consideration.

S.B. 665, S.D. 1 amends the renewable energy technologies income tax credit. The credit is changed so that it applies to "solar energy property," rather than a "solar energy system." A new credit is also created for "energy storage property" if the cost is not included in the basis of solar energy property. The measure is effective on July 1, 2017 and applies to taxable years beginning after December 31, 2017. A subsection is added which states that no tax credit will be allowed after the taxable year ending December 31, 2035. A summary of the changes to the credit follows:

Property exclusively for heating water

- The amount of the credit for solar energy property installed exclusively to heat water is 35% of the basis up to the applicable cap amount as follows:
  - $2,250 for single-family residential property
  - $350 per unit per system for multi-family residential property
  - $250,000 for commercial property

Property used to generate electricity

- The amount of the credit is determined as a percentage of the basis of the property. The amounts are:
  - 25% of the basis – January1, 2018 to December 31, 2020
  - 20% of the basis – January 1, 2021 to December 31, 2023
  - 15% of the basis – January 1, 2024 and thereafter

- The credit is capped at the following amounts:
  - $5,000 per property if installed for single-family residential property

- $350 per unit per property if installed for multi-family residential property
- $500,000 per property if installed for commercial property

Property used to generate electricity that is grid-connected and incorporates energy storage property

- The amount of the credit is determined as a percentage of the basis of the property. The amounts are:
  - 25% of the basis – January1, 2018 to December 31, 2020
  - 20% of the basis – January 1, 2021 to December 31, 2023
  - 15% of the basis – January 1, 2024 and thereafter

- The credit is capped at the following amounts:
  - $10,000 if installed for single-family residential property
  - $700 per unit per system for multi-family residential property
  - $500,000 per property if installed for commercial property

Property used to store electricity if the costs were not included as part of solar or wind-energy property

- The amount of the credit is determined as a percentage of the basis of the property. The amounts are:
  - 25% of the basis – January1, 2018 to December 31, 2020
  - 20% of the basis – January 1, 2021 to December 31, 2023
  - 15% of the basis – January 1, 2024 and thereafter

- The credit is capped at the following amounts:
  - $10,000 if installed for single-family residential property
  - $750 per unit per system for multi-family residential property
  - $500,000 per property if installed for commercial property

Combined energy storage and solar energy system

- The applicable credit for an energy storage system plus one half of the available applicable credit for a solar energy system

Wind energy property

The credit for wind energy property is 20% of the basis up to an unspecified cap amount

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.

First, the amendments proposed in this measure do not address the issue of how many credits that a taxpayer may claim. Each of the caps are per "energy storage property," but there

are no provisions providing any further guidance. Simply replacing the word "system" with "energy storage property" does not remedy the difficulty in administration of this credit at all. The caps must be tied to another factor that can be quantified with certainty such as the direct current solar panel rating or the storage capacity measured in kilowatt-hours. The measure cannot be administered as written due to this ambiguity. The Department suggests redefining the caps so that they are effective.

Second, the Department notes that the structure of this credit allows taxpayers installing energy storage property and solar energy property to claim the two properties separately. The credit for energy storage property requires only that the cost of the energy storage property not be included in the basis of a solar or wind energy property. The way the credit is currently worded taxpayers may install solar energy property and energy storage property, claim a tax credit of $5,000 for the solar energy property (assuming the property is installed in 2018 on residential real property), and $10,000 for the energy storage property, for a total of $15,000 in credit. The same taxpayer would only be entitled to $10,000 in credit if they claimed both installations together.

The S.D. 1 version of this measure adds a paragraph which provides that a benefit for combined energy storage and solar energy systems, but this paragraph does resolve the issue of the number of credits that a taxpayer can claim. It is also unclear how this paragraph is to be administered in situations that involve grid-connected solar energy properties that incorporate energy storage property; energy storage property has their own category, but a different cap amount. The Department suggests clarifying this provision.

S.D. 1 also adds a new subsection (l) that disallows the credit for taxable years ending after December 31, 2035. The Department suggests amending this subsection to read, "No credit under this section shall be allowed after the taxable years beginning after December 31, 2035, to accommodate calendar and fiscal year filers.

Finally, the Department is able to implement this measure for taxable years beginning after December 31, 2017, the current effective date.

Thank you for the opportunity to provide comments.

DAVID Y. IGE
GOVERNOR

LUIS P. SALAVERIA
DIRECTOR

MARY ALICE EVANS
DEPUTY DIRECTOR

DEPARTMENT OF BUSINESS, ECONOMIC DEVELOPMENT & TOURISM

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Statement of
LUIS P. SALAVERIA
Director
Department of Business, Economic Development and Tourism
before the
SENATE COMMITTEE ON WAYS AND MEANS
Monday, February 27, 2017
9:30 a.m.
State Capitol, Conference Room 211

in consideration of
SB665, SD1
RELATING TO RENEWABLE ENERGY.

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

The Department of Business, Economic Development and Tourism (DBEDT) **opposes** SB 665, SD1, which replaces the current renewable energy technology systems tax credit (RETITC) with tax credits for solar energy property, wind energy property, and energy storage property; and applies to taxable years beginning after December 31, 2017 and sunsets December 31, 2035.

DBEDT recognizes that energy storage can play an important role in achieving Hawaii's clean energy goals and believes energy storage can provide benefits to the entire electric system if the appropriate energy storage technologies are implemented and used in an optimal manner. 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 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.

To elaborate, 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. utility-scale, commercial, residential), how much capacity is needed, and what operations or services are required to support the electric system (e.g. load shifting, contingency, regulation). Also, the Distributed Energy Resources docket, Demand Response docket, and Community-Based Renewable Energy (CBRE) Program docket may result in modifying or creating new tariffs or rate structures that could provide the financial mechanisms needed to incentivize energy storage.

For example, the Public Utilities Commission's recently released their proposed CBRE program framework for review and comments (reference Order No. 34388, Docket No. 2015-0389). The proposed CBRE Program offers varying bill credit rates for three time periods and peaker facilities. A solar photovoltaic (PV) system without storage may be limited to the mid-day period (9 am to 5 pm), which offers the lowest bill credit rate. However, if a storage device is used this system could take advantage of the off-peak, on-peak, or peaker rates which could be up to 87% higher than the rates for the mid-day period. Thus, if adopted this program could provide a financial incentive to encourage the adoption of storage. If you now combine this measure's tax credit of up to $500,000 PLUS the higher credit rate from the proposed CBRE Program, this measure will be creating a double incentive for a commercial system.

It is unclear why Section 235-12.5 (a)(5) is included in this measure (page 12, lines 5-12), which appears to allow taxpayers to claim the proposed tax credit for an energy storage property, in addition to one half of the tax credit for a solar energy property or for a solar energy property that incorporates an energy storage property. DBEDT believes this incentive is already being offered under Section 235-12.5 (a)(3)for solar energy properties that incorporate an energy storage property (page 7, lines 15-20).

It is also unclear why this bill proposes cap amounts for storage systems that are larger than those offered for solar systems. DBEDT believes it would be more appropriate to reduce the 'energy storage property' tax credit caps from $10,000 to $5,000 for single-family residential properties and from $700 to $350 for multi-family residential properties in order to bring them into alignment with the caps for 'solar energy properties that incorporate storage properties' and 'solar energy properties'. Further related to caps, DBEDT recommends using the existing caps and categories established for 'wind powered energy systems' in Section 235-12.5 HRS for 'wind energy properties'.

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 665, SD1.

LEGISLATIVE TAX BILL SERVICE

TAX FOUNDATION OF HAWAII

126 Queen Street, Suite 304 Honolulu, Hawaii 96813 Tel. 536-4587

SUBJECT: INCOME, Renewable Energy Tax Credits

BILL NUMBER: SB 665, SD-1

INTRODUCED BY: Senate Committee on Transportation and Energy

EXECUTIVE SUMMARY: Amends the renewable energy technologies income tax credit to change limitations for certain technology types, and to make the credit caps apply per energy property rather than per system. Provides increased caps for photovoltaic property that is grid-connected and incorporates energy storage property. Generally the credit is being phased down, perhaps in recognition that the technology involved is no longer new. If approved, the credit would be an indeterminate expenditure of public dollars out the back door, and could carry with it large administrative costs.

SYNOPSIS: Amends HRS section 235-12.5, the renewable energy technologies income tax credit, to allow credits for each energy property, as follows:

For each solar energy property used exclusively to heat water and is installed and first placed in service in the State by a taxpayer during the taxable year: 35% of the basis up to the applicable cap amount, which is determined as follows: (A) $2,250 per solar energy property for single-family residential property; (B) $350 per unit per solar energy property for multi-family residential property; and (C) $250,000 per solar energy property for commercial property.

For each solar energy property used primarily to generate electricity and is installed and first placed in service in the State by a taxpayer during the taxable year, the credit is a certain percentage of the basis up to the applicable cap amount, which is determined as follows: (A) $5,000 per solar energy property for single-family residential property, except that if all or a portion of the property is used to fulfill the substitute renewable energy technology requirement in section 196-6.5(a)(3), HRS, the credit will be reduced by the credit rate times basis or $2,250, whichever is less; (B) $350 per unit per solar energy property for multi-family residential property; and (C) $500,000 per solar energy property for commercial property. The credit rate is 25% for calendar years 2018-2020, 20% for calendar years 2021-2023, and 15% thereafter.

If the solar energy property is grid-connected and incorporates an energy storage property, the applicable cap amount is changed to: (A) $10,000 per solar energy property for single-family residential property, except that if all or a portion of the property is used to fulfill the substitute renewable energy technology requirement in section 196-6.5(a)(3), HRS, the credit will be reduced by the credit rate times basis or $2,250, whichever is less; (B) $700 per unit per solar energy property for multi-family residential property; and (C) $500,000 per solar energy property for commercial property. The credit rate is 25% for calendar years 2018-2020, 20% for calendar years 2021-2023, and 15% thereafter.

For each energy storage property installed and first placed in service in the State by a taxpayer during the taxable year, if the cost of the energy storage property is not also included in the creditable basis of a solar or wind energy property: a certain percentage of the basis up to the applicable cap amount, which is determined as follows: (A) $10,000 per energy storage property for single-family residential property; (B) $700 per unit per energy storage property for multi-family residential property; and (C) $500,000 per energy storage property for commercial property. The credit rate is 25% for calendar years 2018-2020, 20% for calendar years 2021-2023, and 15% thereafter.

Wind energy property is also creditable, and the credit rate is 20% basis or $_____, whichever is less.

Provides that multiple owners of a single property shall be entitled to a single tax credit, which is apportioned between the owners in proportion to their contribution to the cost of the property. For a partnership, S corporation, estate, or trust, the credit is allowed for every eligible solar or wind energy property [probably should also include energy storage property] that is installed and placed in service in the State by the entity. The credit is distributed pursuant to IRC section 704(b).

Defines "basis" on which the credit is based as costs related to the solar energy, wind energy, or energy storage property, including accessories, energy storage, and installation, but does not include the cost of consumer incentive premiums unrelated to the operation of the energy property or offered with the sale of the energy 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 solar or wind energy property, such as the reroofing of single-family residential property, multi-family residential property, or commercial property, shall not constitute a part of the basis of the eligible property; provided that costs incurred for the physical support of the solar or wind energy property, such as racking and mounting equipment and costs incurred to seal or otherwise return a roof to its pre-installation condition shall constitute part of the basis for the purposes of this section. States that basis shall be consistent with the use of basis in section 25D or section 48 of the Internal Revenue Code.

Defines "energy storage property" as any identifiable facility, equipment, or apparatus, including battery, grid-interactive water heater, ice storage air-conditioner, or the like, that is permanently fixed to a site and electrically connected to a site distribution panel by means of an installed wiring, and that receives electricity generated from various sources, stores that electricity as electrical, chemical, thermal, or mechanical energy, and delivers the energy back to an electric utility or the user of the electric system at a later time.

Defines "solar or wind energy property" as any identifiable facility, equipment, apparatus, or the like that converts solar or wind energy to useful thermal or electrical energy for heating, cooling, or reducing the use of other types of energy that are dependent upon fossil fuel for their generation, if (1) the construction, reconstruction, or erection of the solar or wind energy

property is completed by the taxpayer; or (2) the solar or wind energy property is acquired by the taxpayer if the original use of the solar or wind energy property commences with the taxpayer.

The tax credit is nonrefundable by default, but a taxpayer may elect to give up 30% of the credit to make it refundable. Alternatively, a taxpayer whose adjusted gross income is $20,000 or less for single filers or $40,000 or less for joint filers may elect to make the tax credit refundable without discount. If a taxpayer receives the nonrefundable credit and is unable to use all of it, the unused credit may be carried forward indefinitely until exhausted. Spouses not filing a joint return may only make the election to the extent that they would have been able to make the election if they had filed a joint return. An election once made is irrevocable.

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.

States that no credit shall be allowed after the taxable year ending December 31, 2035.

EFFECTIVE DATE: July 1, 2017, shall apply to taxable years beginning after December 31, 2017.

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.

As a technical matter, proposed section 235-12.5(*l*), the drop-dead provision which now states that no credit shall be allowed "after the taxable year ending December 31, 2035," needs to be clarified as to how it may apply to taxable years that do not end on December 31, 2035 (fiscal

year ending June 30, 2035, or beginning July 1, 2035?) and as to how it may apply to tax credits earned before 2035 that have been carried forward lawfully. A conventional sunset date provision may be more appropriate.

Digested 2/25/2017

Email: communications@ulupono.com

SENATE COMMITTEE ON WAYS & MEANS
Monday, February 27, 2017 — 9:30 a.m. — Room 211

Ulupono Initiative Supports SB 665 SD 1, Relating to Renewable Energy

Dear Chair Tokuda, 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.

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 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 <u>supports</u> SB 665 SD 1, which replaces the renewable energy systems tax credit

with tax credits for energy storage, because it aligns with our goal of increasing the production of clean, renewable energy in Hawai‘i.

While the bill is not perfect, it aligns more closely with the criteria enumerated above (see attached table). If the Legislature believes the projected net cost of the bill is too high, it could lower the residential cap to provide more savings for the State budget.

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 of implementing this bill would be a savings to the State of $135 million dollars with 50 percent residential new solar/storage. However, if residential uptake accounts for 75 percent of the new solar/storage, then there would be a net cost of $1 million dollars through 2025. 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
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

LATE

Before the Senate Committee on Ways and Means
Monday, February 27, 2017, 9:30 a.m.., Room 211
SB 665 SD 1: Relating to Renewable Energy

Aloha Chair Tokuda, 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 for SB 665 which creates tax incentives for customer-invested PV plus energy storage for both new installs and legacy PV systems in addition to stand alone storage. SB 665 SD 1 also ramps down the tax credit over a 6 year period.

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 reserves[1], 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.

However, the DER Council does not support a ramp of the credit at this time. The renewable energy industry has already been significantly downsized by changes in policy and interconnection issues in this last year, and the new customer self-supply tariff has seen very

[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.

slow enrollment. At the same time, although the development of this new wave of energy systems has been slow to start, distributed energy stands to take Hawaii to a new era where customer invested systems are aggregated and utilized by the utility as a resource for all ratepayers.

Thank you for the opportunity to testify

Leslie Cole-Brooks

Executive Director

Distributed Energy Resources Council of Hawaii

February 27, 2017

Senator Jill N. Tokuda, Chair
Senator Donovan M. Dela Cruz, Vice Chair
Committee on Ways and Means

Re: Testimony on SB 665 (Relating to Renewable Energy)
Monday, Feb. 27, 2017 @ 9:30 a.m.; Conference Room 211, State Capitol

Purpose: Amber Kinetics, developer of the first utility-scale flywheel, supports a tax credit for energy storage properties, and a definition of "energy storage property" that includes Amber's flywheel storage technology.

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 665's definition of "energy storage property" which encompasses Amber's flywheel storage technology. SB 665 defines "energy storage property" as "any identifiable facility, equipment, or apparatus, including battery, grid-interactive water heater, ice storage air-conditioner, or the like, that is permanently fixed to a site and electrically connected to a site distribution panel by means of an installed wiring, and that receives electricity generated from various sources, stores that electricity as electrical, chemical, thermal, or mechanical energy, and delivers the energy back to an electric utility or the user of the electric system at a later time."

SB 665 also specifies that "for a partnership, S corporation, estate, or trust, the tax credit allowable is for every eligible solar or wind energy property that is installed and placed in service in the State by the entity". Amber recommends that this provision be amended to include energy storage property.

Thank you for the opportunity to comment on this bill.

Sincerely,

Bill Barnes
Managing Director, Development

LATE

From: mailinglist@capitol.hawaii.gov
Sent: Sunday, February 26, 2017 8:22 PM
To: WAM Testimony
Cc: MSMatson@hawaii.rr.com
Subject: Submitted testimony for SB665 on Feb 27, 2017 09:30AM

SB665
Submitted on: 2/26/2017
Testimony for WAM on Feb 27, 2017 09:30AM in Conference Room 211

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

Comments: In support of SB 665, SD1, Section 2(4)(A).

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

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From: mailinglist@capitol.hawaii.gov
Sent: Sunday, February 26, 2017 7:55 PM
To: WAM Testimony
Cc: jeanyounghawaii@gmail.com
Subject: *Submitted testimony for SB665 on Feb 27, 2017 09:30AM*

SB665
Submitted on: 2/26/2017
Testimony for WAM on Feb 27, 2017 09:30AM in Conference Room 211

Submitted By	Organization	Testifier Position	Present at Hearing
Jean Young	Individual	Support	No

Comments:

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SB665
Submitted on: 2/26/2017
Testimony for WAM on Feb 27, 2017 09:30AM in Conference Room 211

Submitted By	Organization	Testifier Position	Present at Hearing
Lou Young	Individual	Support	No

Comments:

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