DAVID Y. IGE
GOVERNOR

Testimony by:

JADE T. BUTAY
INTERIM DIRECTOR

Deputy Directors
ROY CATALANI
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IN REPLY REFER TO:

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
869 PUNCHBOWL STREET
HONOLULU, HAWAII 96813-5097

January 31, 2018
1:15 p.m.
State Capitol, Room 225

.

S.B. 2100
RELATING TO RENEWABLE ENERGY.

Senate Committee on Transportation and Energy

The Department of Transportation **supports** Part II & III of this bill which provides general funds for a building energy efficiency demonstration project for building energy efficiency designs that assist the State in reaching net zero emissions.

Thank you for the opportunity to provide testimony.

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 TRANSPORTATION AND ENERGY
Wednesday, January 31, 2018
1:15 p.m.
State Capitol, Conference Room 225

in consideration of
SB 2100
RELATING TO RENEWABLE ENERGY.

Chair Inouye, Vice Chair Espero, and Members of the Committee.

The Department of Business, Economic Development and Tourism (DBEDT) **provides comments on Part I and supports Part II** of SB 2100.

Part I

Part I replaces the current renewable energy technology systems tax credit with tax credits for solar energy property, wind energy property, and energy storage property; applies to taxable years beginning after December 31, 2018.

DBEDT has concerns about ramping down the tax credit at this time for solar energy properties used primarily to generate electricity given recent 30% federal tariff on imported solar cells and panels, which has the potential to increase their installed cost. Further, while the Net Energy Metering program coupled with tax credits provided for attractive payback periods, since then the program has been replaced with other programs (i.e. Customer Grid Supply Plus and Smart Export)[1] which have lengthened the payback periods. As a whole, the number of solar energy systems installed in Honolulu has dropped significantly in recent years.[2] Hence, we caution against further precipitating this trend.

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

[1] Public Utilities Commission (PUC) Order No. 34924 established a revised Customer Grid Supply (CGS+) at 10.08 cents per kilowatt-hour (kwh) as opposed to 15.07 cents per kwh for current Customer Grid Supply (CGS) rate in Oahu, capped at 35 MW. Order No. 34924 also established Smart Export program, which compensates permissible exports (during 12 a.m-9 a.m. and 4 p.m. – 12 a.m.) in Oahu at 14.97 cents/kwh. Rates and caps vary per utility for each program.

[2] According to *Solar PV Installations in Honolulu: an analysis based on building permit data*, 2017 update, "PV installation further slowed down after 2016 with less than 5,000 PV permits issued in 2016 and mere 1,000 permits in the first six months of 2017", page 1. Reference: http://files.hawaii.gov/dbedt/economic/data_reports/Solar_PV_Installation_In_Honolulu_Sep2017.pdf

system if the appropriate energy storage technologies are implemented and used in an optimal manner.

However, DBEDT has concerns about using tax credits as the preferred method for incentivizing an increase in use of energy storage. Consistent with our energy policy of promoting an efficient marketplace, the implementation of PUC-ordered rates that incentivize more adoption of energy storage would be a more direct mechanism to deliver price signals to the marketplace.

Should the Legislature choose to move forward with this bill, we recommend deleting lines 13-20 on page 12 as the combined energy storage and solar energy system tax credit provided in section (5) appears redundant to prior sections (2) and (3).

Finally, given the limited State budget, we are concerned about the unknown expansion of the aggregate storage tax credit provided by this bill. We defer to the Department of Budget and Finance on the impact on the State budget from this bill and the Department of Taxation on its ability to administer its duties under this bill.

DBEDT also defers to the Public Utilities Commission in setting tariffs that can incentivize the adoption of battery storage that align with its orders that are supportive of Hawaii's 100% Renewable Portfolio Standards goal by 2045.

Part II

Part II directs that the Department of Transportation (DOT), with assistance from DBEDT, shall implement an energy efficiency demonstration project for building energy efficiency designs that assist the State in reaching net zero emissions. The DOT and DBEDT shall conduct an analysis of the cost and benefits of adopting the building energy efficiency designs. The DOT shall submit a report to the 2020 legislature; an unspecified amount is appropriated out of the special fund to be expended by the DOT.

DBEDT will be pleased to work with and assist DOT.

Thank you for the opportunity to offer these comments on SB 2100.

DAVID Y. IGE
GOVERNOR

SHAN S. TSUTSUI
LIEUTENANT GOVERNOR

LINDA CHU TAKAYAMA
DIRECTOR

DAMIEN A. ELEFANTE
DEPUTY DIRECTOR

STATE OF HAWAII
DEPARTMENT OF TAXATION
830 PUNCHBOWL STREET, ROOM 221
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To: The Honorable Lorraine Inouye, Chair,
and Members of the Senate Committee on Transportation & Energy

Date: Wednesday, January 31, 2018
Time: 1:15 P.M.
Place: Conference Room 225, State Capitol

From: Linda Chu Takayama, Director
Department of Taxation

Re: S.B. 2100, Relating to Renewable Energy.

The Department of Taxation (Department) appreciates the intent of S.B. 2100, but has concerns that this measure cannot be administered as currently written. The Department offers the following comments for your consideration.

S.B. 2100 makes amendments to Hawaii Revised Statutes (HRS) section 235-12.5, which governs the Renewable Energy Technologies Income Tax Credit (RETITC). A summary of key provisions are as follows:

- Replaces the term "system" with the term "property" for the purpose of applying the cap;
- Recognizes three general categories of "property": solar energy property, energy storage property, and wind energy property;
    - Solar energy property is further divided into property used exclusively to heat water and property that is used primarily to generate electricity.
- Creates a separate credit for combined energy storage and solar energy property;
- Changes the RETITC percentage amounts as follows:
    - For solar energy property used primarily to generate electricity, as well as energy storage property not connected to a solar energy property:
        - 25% for property placed into service after December 31, 2018 and before January 1, 2022
        - 20% for property placed into service between December 31, 2021 and January 1, 2025
        - 15% for property placed into service after December 31, 2024.
- Defines "basis" as "costs related to the solar energy, wind energy, or energy storage property" and states that the use of "basis" in the statute "shall be consistent with use of

basis in section 25D or section 48 of the Internal Revenue Code" (IRC);

- Effective on July 1, 2018 and applies to taxable years beginning after December 31, 2018.

First, the Department notes that this measure cannot be administered as currently written. As written, this measure poses the same problem with ambiguity as the currently enacted version of HRS section 235-12.5. The RETITC has historically been very difficult to administer, primarily due to the fact that the statute contains no definition of the word "system," but still caps credit amounts on a per-system basis. The term "system," which is not defined in Hawaii income tax law, has caused much confusion and uncertainty for taxpayers and industry participants and has resulted in a much larger than anticipated number of RETITC claims and revenue lost. The ambiguity in the statute was ultimately addressed by the Department's enactment of administrative rules pertaining to the RETITC in November 2012. (See Hawaii Administrative Rules (HAR) §§ 18-235-12.5-01 through 18-235-12.5-06). The changes proposed by this measure have the effect of making these administrative rules obsolete and reintroducing a problem that has already been resolved.

The definition in this measure for "solar or wind energy property" is not significantly different from the prior definition of "solar or wind energy system," and will result in the same ambiguity seen previously with this tax credit. Although the language is changed to "property" rather than "system," there is no meaningful change in the definition; with this definition "property" is synonymous with "system" as the statute was previously worded. The Department strongly suggests that the measure be amended to include definitions and provisions that will provide sufficient guidance to administer the RETITC without the need for administrative rules. Without sufficient clarity, this tax credit could result in larger than expected revenue losses, as seen previously with the RETITC.

Additionally, the Department notes that the terms "solar energy property" and "wind energy property" are already defined in federal regulations pertaining to federal income tax incentives for renewable energy. (See 26 C.F.R. 1.48-9 "Definition of energy property.") These definitions are applied to federal tax incentives pertaining to renewable energy. As they are used in the federal regulations, these terms are descriptive of a class of property rather than a discrete item, i.e. they refer to all solar energy property installed by the taxpayer during a taxable year rather than to an "identifiable facility, equipment, apparatus, or the like," and therefore these terms do not present the issue of multiple tax credits claimed by a single taxpayer during the taxable year.

If the intent of the Legislature is to make Hawaii's tax credit more similar to the federal tax credit, the Department suggests simply allowing taxpayers to claim a credit equal to a percentage of the federal tax credit available for renewable energy property, without applying a cap. As explained above, the caps have caused confusion for taxpayers and administrative difficulty for the Department, resulting in unintended revenue losses for the State.

Thank you for the opportunity to provide comments.

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 2100

INTRODUCED BY: INOUYE, ESPERO, KIDANI, Baker, S. Chang, Galuteria, Keith-Agaran, Wakai

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 196-6.5, relating to requiring a solar water heater system for new single-family residential construction, to decouple the definition from the tax credit definition.

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 2019-2021, 20% for calendar years 2022-2024, 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 2019-2021, 20% for calendar years 2022-2024, 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) $5,000 per energy storage property for single-family residential property; (B) $350 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 2019-2021, 20% for calendar years 2022-2024, and 15% thereafter.

Credits for energy storage and a solar energy system may stack.

Wind energy property is also creditable, and the credit rate is 20% basis up to the applicable cap amount, which is determined as follows: (A) $1,500 per wind 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 20% of basis or $1,500, whichever is less; (B) $200 per unit per wind energy property for multi-family residential property; and (C) $500,000 per wind energy property for commercial property.

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 for solar or wind energy properties 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 authorized for taxable years ending after December 31, 2036.

Also provides for a building energy efficiency demonstration project.

EFFECTIVE DATE: July 1, 2018, shall apply to taxable years beginning after December 31, 2018.

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, the refundability elections in subsections (f) and (g) are written to apply for "solar or wind energy properties." This language means that the election does not apply to energy storage systems. That result may not be what was intended, and may create unnecessary complexity. If it is intended that the refundability elections apply to the credit in general, the Committee should consider revising subsections (f) and (g) accordingly.

Digested 1/27/2018

Hawaii Solar Energy Association

Serving Hawaii Since 1977

LATE

TESTIMONY OF THE HAWAII SOLAR ENERGY ASSOCIATION
IN REGARD TO SB 2100, RELATING TO RENEWABLE ENERGY
BEFORE THE
SENATE COMMITTEE ON TRANSPORTATION AND ENERGY
ON
WEDNESDAY, JANUARY 31ST, 2018

Chair Inouye, Vice-Chair Espero, and members of the committee, my name is Will Giese, and I am the executive Director of the Hawaii Solar Energy Association, Inc. (HSEA).

The HSEA was founded in 1977 to further solar energy and related arts, sciences and technologies with concern for the ecologic, social and economic fabric of the Hawaiian Islands. Our membership includes the vast majority of locally owned and operated solar installers, contractors, distributors, manufacturers, and inspectors across all islands.

HSEA **oppose SB 2100** as it is currently written. This measure seeks to amend §196-6.5 and §235-12.5 in light of changes in both the overall state of clean energy technology as well as recent alterations in state policy.

Over the last 2 years, since the closing of NEM, the HSEA has witnessed and recorded significant job losses across all levels of our industry.[1] Permitted and interconnected systems have declined between 40-60% year over year and several local companies have ceased operations and closed their doors for good. On some islands, it is likely that there has been a reduction of up to 50% of the solar workforce as a result of this decline.

This precipitous decline in systems installed, while troubling for both state energy goals and the local economy, has also had the effect of lowering the state's tax obligation for claimed solar investment tax credits. Therefore, the argument that the solar tax credit creates an undue financial burden on the state is simply false, given that the amount of credits claimed over the past two years have declined. In fact, over the life of a system Hawaii may actually be *decreasing* its own taxable revenue. A recent study of Hawaii's investment tax credit found that it benefits both the state and the individual energy consumer.[2] Specifically, the study found that an average residential PV system **generated $1.97 in state revenue for every $1.00 spent** on that system's construction over the life of that system.

From a state policy perspective, Hawaii PUC's order ending NEM in October 2015 and its subsequent orders in Docket 2014-0192 as well as the Power Supply Improvement Plan (2015-0183) and HECO's Grid Modernization Plan (April 2017), have urged the

[1] See "HSEA Industry Reports" 2016-2017. Provided upon request or at hsea.org.
[2] Loudat, Thomas A., and Kasturi, Prahlad. "The Economic and Fiscal Impacts of Hawaii's Solar Tax Credit." *International Journal of Energy Economics and Policy : IJEEP*, vol. 7, no. 1, 2017, pp. 224–252.

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adoption of energy storage technology in congress with renewable energy generators such as solar PV as a means to a 100% renewable portfolio standard as outlined in Act 97.[3] Thus, any incentive that could be adopted by the Hawaii state legislature that would allow our state's energy markets to utilize these types of technologies should be encouraged.

However, given recent federal tariff decisions regarding foreign manufactured solar modules[4] as well as the White House administration's increasingly troubling tendency to push energy schemas favoring fossil fuels like coal and natural gas[5] it is ***imperative*** that Hawaii be a leader in both federal and state energy policy. Recent tariff decisions on PV modules manufactured outside the United States are already impacting financing models of both large and small PV developments. Changes to the state's tax code, especially one as drastic as a 10% reduction in state investment tax credits over a 1-year time frame beginning in 2019[6] will put further pressure on already overstressed project development timelines and financing structures. This will likely increase project timelines or force developers back to the drawing board, slowing Hawaii's progress towards a 100% 2045 RPS and preventing energy consumers from benefiting from renewable energy deployment.

In general, tax credits without step-downs create market stability and allow for reliable benchmarks that the state can use to measure consistent revenue projections. Given the instability of the federal government's energy plan, the recent trade decision regarding the import of foreign made solar panels, and the state of Hawaii's aggressive energy goals, **we cannot support SB2100 in its current form.**

If the legislature were to consider a step-down structure like the one proposed in SB2100, we would suggest the following amendments be considered:

- Begin the stepdown on January 1st, 2021 to allow for any larger commercial or utility scale projects currently being developed adequate runway to complete their projects. This prevents developers from having to go back to the drawings board to reassess financing structures and encourages deployment of clean renewable energy.
- A step-down of 10% within the first year of SB 2100's effect would have an overall negative impact on renewable projects currently in the pipeline for

[3] https://governor.hawaii.gov/newsroom/press-release-governor-ige-signs-bill-setting-100-percent-renewable-energy-goal-in-power-sector/
[4] Shallenberger, Krysti. "Will Utilities Keep Investing in Solar after Trump's Tariffs?" *Utility Dive*, 25 Jan. 2018, www.utilitydive.com/news/will-utilities-keep-investing-in-solar-after-trumps-tariffs/515556/.
[5] Roberts, David. "Rick Perry's Proposed Coal Bailout Just Died an Unceremonious Death."*Vox*, Vox, 9 Jan. 2018, www.vox.com/energy-and-environment/2018/1/9/16866196/perry-coal-bailout-nopr-ferc.
[6] See SB2100, Page 5, lines 11-15

deployment. We instead suggest a step-down of 5% or less in the first year, consistent with the other step-downs detailed in SB 2100.

- Consider a step-down structure more in line with the state's 2045 RPS goals. The step-down would occur at a protracted rate over a longer period of time. For instance, there are 27 years left till 2045 and a 35% tax credit, meaning a reduction of the tax credit at approximately 1.3-1.5% per year would result in a phase out of the tax credit inverse to the deployment of renewable energy aligned with state goals.
- Consider removing the cap amount for any installed system claiming a tax credit as the credit is stepped down. This allows smaller projects that have a greater potential to benefit low and middle income residents to take advantage of the state's tax credit, thereby encouraging development of renewable energy in underserved communities.

We urge the committee to consider these points and **oppose SB 2100 as currently drafted**.

Thank you for the opportunity to testify.

THE ALLIANCE FOR SOLAR CHOICE

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LATE

SENATE COMMITTEE ON TRANSPORTATION AND ENERGY

January 31, 2019, 1:15 P.M.
(Testimony is 2 pages long)

TESTIMONY IN OPPOSITION TO SB 2100

Aloha Chair Inouye and Members of the Committee:

The Alliance for Solar Choice (TASC) respectfully opposes SB 2100, relating to renewable energy, as currently written. This measure ramps down the existing renewable energy tax credit starting in 2019 and makes energy storage eligible for the credit.

Hawaii's solar industry is contracting. The market has seen a 50% reduction in the past two years, and a likely 50% reduction in employment. Significant market headwinds remain, including President Trump's recent enactment of a tariff on imported solar panels and limitations on where and when customers can interconnect to the electrical grid.

Reduced solar installations directly impacts the amount of REITC tax credits claimed and, conversely, reduces the amount of taxable income available for the state. The market contraction also reduces the opportunity for thousands of customers to enjoy the benefits of cheaper and cleaner power.

TASC supports smart, prudent incentives to meet Hawaii's ambitious clean energy goals. Successful incentives must be predictable and give the market time to react. As drafted, this measure would likely reduce the solar incentive by 30% starting next year.[1] This impacts customers who are under contract this year but, for many reasons — including utility delay in allowing interconnection — are unable to install a solar system until next year.

This bill seems to arise out of a bills discussed in 2013, where the industry supported adopting the federal definition of "property" and eliminating caps on the total eligible credit.[2] In essence, moving to a straight percentage that diminished over time. This made administration of the credit easier for both the customer and the state. In 2013, this bill received support from

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[1]Hawaii's tax credit applies per "system," which for residential systems has been administratively defined as a 5kW photovoltaic system. So if a Hawaii resident installs a 10kW system, they're entitled to a credit cap of up to $10,000. The instant bill, however, states it shall be interpreted in accordance with the pertinent Internal Revenue Code sections. This bill also eliminates the word "system" and replaces it with term "property." The federal interpretation of "property" results in a one-time credit for an entire installation. Applying that logic to the HD1 — with a cap not found in federal law — it is likely that the monetary cap would always apply regardless of the size of the system.

Put another way, a typical solar installation would see an approximate 30% reduction in the total tax credit. A typical solar installation with energy storage would see a minimal increase in the incentive amount.

[2] See, e.g., House Bill 497 H.D. 3 (2013).

DBEDT, the Hawaii Solar Energy Association, Distributed Energy Partners, Hawaii PV Coalition, Sunpower, the Pacific Resource Partnership, and many more. If this Committee wants to use the federal term "property," many of the concerns with this bill could be eliminated if the caps were removed and the credit rate reduced along the lines of:

> (A) Thirty five per cent of the basis for solar energy or energy storage property placed in service on or before December 31, 2018;
> (B) Thirty per cent of the basis for solar energy or energy storage property placed in service after December 31, 2018, and on or before December 31, 2019;
> (C) Twenty five per cent of the basis for solar energy or energy storage property placed in service after December 31, 2019, and on or before December 31, 2020;
> (D) Twenty per cent of the basis for solar energy or energy storage property placed in service after December 31, 2020, and on or before December 31, 2021; and
> (E) Fifteen per cent of the basis for solar energy or energy storage property placed in service after December 31, 2021

In the alternative, we suggest this Committee leave the current definitions of "system" in place and stagger the credit until Hawaii achieves its 2045 100% renewable portfolio standards.

Mahalo for the opportunity to submit these comments.

Email: communications@ulupono.com

SENATE COMMITTEE ON TRANSPORTATION & ENERGY
Wednesday, January 31, 2018 — 1:15 p.m. — Room 225

Ulupono Initiative Strongly Supports SB 2100 with Amendments, Relating to Renewable Energy

Dear Chair Inouye, Vice Chair Espero, 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.

Ulupono strongly supports SB 2100 with Amendments, 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 being revenue neutral to revenue positive for the State.

Much of SB 2100 appears to be indentical to the latest version of SB 665 from last session.

The first amendment we recommend is to ensure that an energy storage property is defined as including both electrochemical energy storage (i.e. batteries) and kinetic energy storage (e.g. pumped storage hydropower, and compressed air). In Hawai'i, pumped hydro energy storage tends to be cheaper than batteries, and the incentives should be indifferent to technology so that the least cost technology is selected. Therefore, we suggest language for page 17, line 17:

"Energy Storage Property" means any identifable facility, equipment or apparatus, including battery, pumped storage hydropower, compressed air storage, grid-interactive water heaters, ice storage air conditioner, or the like, ...

In considering the alternatives for energy storage tax credits, Ulupono believes that SB 2100 adheres to all the following good policy principles.

Renewable Energy Subsidies Policy Principles:

- 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)

- 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. Our understanding from last session's Department of Taxation testimony is that the use of the word property is acceptable and that the current language is this bill adheres to the Department's needs.

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 $100 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 $20 million dollars through 2025. We caution these numbers are only indicative of the important levers that can impact the overall State budget exposure.

The second amendment Ulupono would propose is to delete section 2, paragraph (5), which is found on page 12, lines 13 – 20. This language was previously added to mitigate double dipping of the tax credit in a prior year's bill version. However, the numbers in the bill have since been updated to solve that issue, thereby not making this section necessary.

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

Kaua`i Island Utility Cooperative
Your Touchstone Energy® Cooperative

Testimony Before the Senate Committee on
Transportation and Energy

By David J. Bissell
Chief Executive Officer
Kauai Island Utility Cooperative
4463 Pahee Street, Suite 1, Lihue, Hawaii, 96766-2000

Wednesday, January 31, 2018, 1:15 p.m.
Conference Room # 225

Senate Bill No. 2100 – Relating to Renewable Energy

To the Honorable Lorraine R. Inouye, Chair; Will Espero, Vice-Chair, and Members of the Committee:

DESCRIPTION:

Replaces the current renewable energy technology systems tax credit with tax credits for solar or wind energy property and energy storage property and is applicable to taxable years beginning after 12/31/2018. Establishes a demonstration project for building energy efficiency designs within the Department of Transportation. (SB2100)

COMMENTS:

Mahalo for the opportunity to provide comments on this measure. Kaua‘i Island Utility Cooperative (KIUC) has concerns about the bill as it is currently written, and the impact it may have on the financial feasibility of utility scale solar projects.

KIUC recently gained PUC approval for a 20 MW, 5 hour solar-plus-storage project for 11 cents per KWh. This project in partnership with AES Distributed Energy (AES) and will break ground in February 2018. KIUC also recently submitted an application for a 14MW, 5 hour solar-plus-storage located with the Pacific Missile Range Facility. This project will provide resiliency and additional reliability to base along with low cost energy to the people of Kauai.

Once both projects are operational, along with recently commissioned Tesla project, KIUC will be close to achieving 65 percent renewable generation. These facilities make environmental sense, and they also offer reasonably priced power for our members. At 11 cents per KWh - achieved under the current tax credit structure - AES projects will deliver reliability and value to our 24,745 members. Utility scale projects benefit all of our members, especially those who cannot afford or for other reasons cannot install their own rooftop solar systems.

Should this bill pass in its current form, the agreement we have with AES would likely be renegotiated, with the possibility that the potential benefits to KIUC's members would be diminished to the point of project abandonment.

We strongly encourage you to reconsider this bill, especially with respect to the change in verbiage from commercial "system" eligibility to "property" eligibility. Many of our concerns would be resolved if the reference in this bill remained as "system" eligibility.

Mahalo for your consideration.

Before the Senate Committee on Transportation and Energy
Wednesday, January 31, 2018, 1:15 p.m., Room 225.
SB 2100: Relating to Renewable Energy

Aloha Chair Inouye, Vice Chair Espero, and members of the Committee,

On behalf of the Distributed Energy Resources Council of Hawaii ("DER Council"), I would like to testify and provide comments on SB 2100 in its current form 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 2100 also ramps down the tax credit over a 6-year period, and changes energy "system" to energy "property."

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.

[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.

As such, the DER Council respectfully submits the following amendments for SB 2100 so that it may best serve the purpose of the bill and support Hawaii's clean energy transformation.

First, SB 2100 currently calls for a ramp of the credit from 35% (with caps) to 15% (with caps) over a six-year period. We believe that a ramp from 35% to 15% over a six-year period is too abrupt and would negate any benefits of an increased cap for energy storage. In addition, the ramp drops immediately from 35% to 25%, which we believe is too steep of a drop from the current credit level. Instead, we recommend a ramp that begins at 30% (down from 35%) and which ramps down to 15% over a nine-year period. This would allow industry to adjust to a reduced ramp and also gear up to install more distributed energy storage.

Next, we oppose the change in definition from energy "systems" to energy "property." The change to energy property would cause chaos at the department of taxation which has provided careful guidance through Tax Information Releases which define the size of system and prevent double dipping of the credit. The change to energy property would make those rules moot, and would require dotax to retool the application of the law. We recommend that the bill keep the original language in HRS 243-12.5 such that energy installations are defined as energy system.

Finally, we are concerned that a sudden reduction of the credit might impact commercial installations that have already obtained financing. In order to protect these sort of projects, we recommend the following language:

For each commercial solar energy property that is used primarily to generate electricity and is with or without grid-connected energy storage property and has an executed customer contract dated prior to June 30, 2018 shall receive thirty-five percent of the basis of the commercial solar energy and energy storage property subject to a $500,000 cap if the commercial energy property is installed and first placed in service in the State by a taxpayer by December 31, 2019

Thank you for the opportunity to testify. We welcome any questions that you might have.

Best regards,
Leslie Cole-Brooks
Executive Director
Distributed Energy Council of Hawaii

SB-2100
Submitted on: 1/31/2018 2:02:58 PM
Testimony for TRE on 1/31/2018 1:15:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Melodie Aduja	OCC Legislative Priorities	Support	No

Comments:

PRESENTATION OF THE

OAHU COUNTY COMMITTEE ON LEGISLATIVE PRIORITIES

DEMOCRATIC PARTY OF HAWAII

TO THE COMMITTEE ON TRANSPORTATION AND ENERGY

HOUSE OF REPRESENTATIVES

TWENTY-NINTH LEGISLATURE

REGULAR SESSION OF 2018

Wednesday, January 31, 2018

1:15 p.m.

Hawaii State Capitol, Conference Room 225

RE: **Testimony in Support** of SB 2100, RELATING TO RENEWABLE ENERGY

To the Honorable Lorraine R. Inouye, Chair; the Honorable Will Espero, Vice Chair, and Members of the Committee on Transportation and Energy:

Good afternoon, my name is Melodie Aduja. I serve as Chair of the Oahu County Committee ("OCC") Legislative Priorities Committee of the Democratic Party of Hawaii. Thank you for the opportunity to provide written testimony on Senate Bill No. 2100, relating to renewable energy, solar and wind energy property tax credit and an appropriation for an energy efficient State building design. The OCC Legislative Priorities Committee is in favor of Senate Bill No. 2100 and support its passage.

Senate Bill No. 2100, is in accord with the Platform of the Democratic Party of Hawai'i ("DPH"), 2016, as it replaces the current renewable energy technology systems

tax credit with tax credits for solar or wind energy property and energy storage property and is applicable to taxable years beginning after 12/31/2018 and provides for building energy efficiency designs within the Department of Transportation.

Specifically, the DPH Platform states, “[w]e seek to achieve energy sustainability based on renewable energy sources. We must encourage the use of clean alternative fuel sources. . We must also urgently develop the use of a variety of cost-effective energy providing systems, encourage transit-oriented development, and support tax incentives that encourage renewable energy initiatives.

We support energy independence, self-sufficiency, affordability and reliability for Hawai’i through the development of renewable alternative energy sources. Specifically, we need to support policies that foster the development of energy production methods and de-emphasize carbon-based fuels and promote renewable sources such as wind, solar, wave, geothermal and Ocean Thermal Energy Conversion (OTEC).

Electric rates in Hawaii are among the highest in the nation despite the fact that we enjoy an abundance of sunshine year-round. Electric utility companies and cooperatives must open the grid to alternative power sources including solar panels and geothermal energy. We support the effort of our government officials to require utilities to provide for the maximum, comprehensive, integrated use of renewable energy and associated technologies such as storage and smart grid technologies.” (Platform of the DPH, P. 7, Lines 355-358 (2016)).

Given that Senate Bill No. 2100 provides for renewable energy, solar and wind energy property tax credits and an appropriation for an energy efficient State building design, it is the position of the OCC Legislative Priorities Committee to support this measure.

Thank you very much for your kind consideration.

Sincerely yours,

/*s/* **Melodie Aduja**

Melodie Aduja, Chair, OCC Legislative Priorities Committee

Email: legislativeprorities@gmail.com, Tel.: (808) 258-8889

SB-2100
Submitted on: 1/27/2018 1:43:17 PM
Testimony for TRE on 1/31/2018 1:15:00 PM

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

Comments: