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To: The Honorable Donovan M. Dela Cruz, Chair
and Members of the Senate Committee on Ways and Means

Date: Tuesday, February 19, 2019
Time: 9:30 A.M.
Place: Conference Room 211, State Capitol

From: Linda Chu Takayama, Director
Department of Taxation

Re: S.B. 1163, S.D. 1, Relating to Renewable Energy

The Department of Taxation (Department) appreciates the intent of S.B. 1163, S.D. 1, but has concerns about its ability to administer the provisions of this bill and offers the following comments for the Committee's consideration.

S.B. 1163, S.D. 1, makes significant amendments to section 235-12.5, Hawaii Revised Statutes (HRS), which governs the Renewable Energy Technologies Income Tax Credit (RETITC). A summary of key provisions are as follows:

- Eliminates the term “renewable energy technologies” and recognizes three general categories of “systems” that are eligible for tax credits: solar energy systems, wind energy systems, and commercial sea water air conditioning systems;
- Further divides solar energy systems into systems used exclusively to heat water and systems that are used primarily to generate electricity;
- Changes the RETITC percentages (up to respective applicable cap amounts) as follows:
 - For each solar energy system used exclusively to heat water and first placed into service in the State by a taxpayer during the taxable year, 35% of the basis up to the following applicable cap amounts:
 - \$2,250 per system for single-family residential property;
 - \$350 per unit per system for multi-family residential property;
 - \$700 per unit per system for multi-family residential property classified as low-income, affordable housing, or senior housing; and
 - \$250,000 per system for commercial property.
 - For each grid-connected solar energy system used primarily to generate electricity:
 - 35% of the basis for systems first placed in service after December 31, 2019, and before January 1, 2021; systems with an executed customer

- service contract dated prior to June 30, 2018 and installed and placed in service before December 31, 2019; and power purchase agreements dated prior to December 31, 2019, and first placed into service before December 31, 2024;
- 30% of the basis for systems first placed in service after December 31, 2020, and before January 1, 2022;
 - 25% of the basis for systems first placed in service after December 31, 2021, and before January 1, 2023;
 - 20% of the basis for systems first placed in service after December 31, 2022, and before January 1, 2024;
 - 15% of the basis for systems first placed in service after December 31, 2023, and before January 1, 2025;
 - 10% of the basis for systems first placed in service after December 31, 2024, and before January 1, 2026; and
 - 5% of the basis for systems first placed in service after December 31, 2025, and before January 1, 2027;
- Up to the following cap amounts:
 - (1) \$2,500 per system for single-family residential property; provided that if all or a portion of the system is used to fulfill the substitute renewable energy technology requirement pursuant to section 196-6.5(a)(3), the credit shall be reduced by twenty-five per cent of the basis or \$2,250, whichever is less;
 - (2) \$350 per unit per system for multi-family residential property;
 - (3) \$700 per unit per system for multi-family residential property classified as low-income, affordable housing, or senior housing;
 - (4) \$250,000 per system for commercial property; and
 - (5) \$750,000 per utility solar energy system procured by an electric utility under a power purchase agreement and approved by the public utilities commission.
 - For each grid-connected wind energy system, 20% of the basis up to the applicable cap amounts:
 - \$1,500 per system for single-family residential property; provided that if all or a portion of the system is used to fulfill the substitute renewable energy technology requirement pursuant to section 196-6.5(a)(3), the credit shall be reduced by 20% of the basis or \$1,500, whichever is less;
 - \$200 per unit per system for multi-family residential property; and
 - \$500,000 per wind energy system for commercial property, provided that for either a system that has an executed customer service contract dated prior to June 30, 2018 that is installed and first placed into service before December 31, 2019, or for a power purchase agreement dated prior to December 31, 2019 that is first placed into service before December 31, 2024, the percentage received shall be 30% of the basis for the wind energy system, up to the cap of \$500,000.
 - For each commercial seawater air conditioning system, 20% of the basis of connecting the commercial seawater air conditioning system to the seawater district cooling system, up to a cap amount of \$100,000.
- Provides that multiple owners of a single system shall be entitled to a single tax credit,

- apportioned between the owners in proportion to their contributions to the cost;
- For partnerships, S corporations, estates, and trusts, allows the credit for every eligible system that is installed and placed in service in the State by the entity, with costs determined at the entity level and the distribution and share of credit determined pursuant to section 704(b) of the Internal Revenue Code (IRC);
 - Defines “basis” as costs related to the solar energy, wind energy, or commercial seawater air conditioning system, including accessories, energy storage, installation, cost of construction to connect to a seawater air conditioning district cooling system, costs incurred for the physical support of the system, such as racking and mounting equipment, and costs incurred to seal or otherwise return a roof to its pre-installation condition; but not including the cost of unrelated consumer incentive premiums, costs for which another tax credit is claimed, or ancillary repair or construction costs incurred in conjunction with installing the system, such as re-roofing a property;
 - States that the use of “basis” in the statute shall be consistent with use of “basis” in section 25D or section 48 of the IRC;
 - Defines "commercial seawater air conditioning system" as a building air conditioning system for commercial, office, or residential buildings connected to a seawater air conditioning district cooling system;
 - Defines “grid-connected” as meaning that the individual or corporate taxpayer has obtained an approved interconnection agreement from an electric utility for the solar energy system “or whose facility does not have an existing tie to the electric grid”;
 - Defines “seawater air conditioning district cooling system” as an identifiable facility, equipment, apparatus, or the like that utilizes naturally occurring cold, deep seawater as its primary source of cooling for production of chilled water for distribution to multiple commercial air conditioning systems;
 - States that "first placed in service" has the same meaning as in 26 C.F.R. § 1.167(a)-11(e)(1);
 - Adds language to the definition of "solar or wind energy system" to provide that the construction, reconstruction, or erection of the system be completed by the taxpayer, or that the system is "acquired" by the taxpayer if the original use of the system commences with the taxpayer;
 - Allows a taxpayer to reduce by 30% the eligible credit amount for solar energy, wind energy, or commercial seawater air conditioning systems and make the credit refundable if the reduced amount exceeds the amount of income tax payment due from the taxpayer, if taxpayer elects to do so on the taxpayer's return for the taxable year during which the system was installed and placed into service;
 - Allows the credit to be refundable for any solar energy, wind energy, or commercial seawater air conditioning system, without discount, if all of the taxpayer's income is from pensions and exempt from taxation under sections 235-7(a)(2) or (3), HRS, or if the taxpayer's adjusted gross income is \$20,000 or less (or \$40,000 or less if married filing jointly);
 - Allows a separate election or non-election of refundability for each separate solar energy, wind energy, or commercial seawater air conditioning system that generates a credit;
 - Disallows the credit for the portion of the renewable energy technology system required by section 196-6.5 that is installed and first placed into service on any newly constructed single-family residential property authorized a building permit issued on or after January 1, 2010;

- States that the credit shall be construed in accordance with federal regulations and judicial interpretations of similar provisions in sections 25D, 45, and 48 of the IRC;
- Allows for planned community associations, condominium associations, and cooperative housing corporations to claim the credit in its own name for systems placed into service and located on common areas;
- Prohibits the credit from being allowed to any government agency or instrumentality;
- Terminates authorization of the credit for taxable years ending after December 31, 2026;
- Applies to taxable years beginning after December 31, 2019, with sections 235-12.5(a)(2)(A) and 235-12.5(a)(3)(C), HRS, taking effect upon approval.

The Senate Committee on Energy, Economic Development, and Tourism Committee made several changes to the previous version of this measure, including:

- Specifying that the tax credit only applies to solar energy systems and wind energy systems that are grid-connected;
- Increasing and reducing certain cap amounts;
- Replacing the previous category of “energy storage systems” with “commercial seawater air conditioning systems”;
- Adding an additional cap level for utility-scale solar energy systems;
- Terminating the credit after December 31, 2026; and
- Changing the effective date for credits that apply to certain commercial properties.

First, the Department notes that 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 sections 18-235-12.5-01 through 18-235-12.5-06, Hawaii Administrative Rules).

The Department notes that the addition of the new category of “commercial seawater air conditioning systems,” without a more detailed definition or guidelines for required energy capacity or output, may create new uncertainty for taxpayers and industry. 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.

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.

Second, the Department notes that the definition of “grid-connected” is unclear. There may be a typographical error with the use of the word “or” and the subsequent phrasing. While the first part of the definition makes sense (a taxpayer has obtained an approved interconnection agreement from an electric utility for the solar energy system), the second part (a facility not

having an existing tie to the electric grid) appears to contradict the whole meaning of “grid-connected.” The use of the word “or” also suggests that either of these seemingly contradictory propositions is viable for taxpayers. The Department suggests amending this language to clarify its intended meaning of grid-connected.

Third, the Department notes that the tax credit in this measure is refundable in certain circumstances. As a general matter, the Department prefers nonrefundable credits because refundable credits create a higher potential for improper claims and abuse. The Department therefore recommends that this credit be made non-refundable.

Fourth, the Department notes that there is no definition or explanation for what constitutes low-income housing, affordable housing, or senior housing, as it relates to which multi-family residential property caps should apply for certain categories of system under the credit. The Department recommends either defining these terms or clarifying how their qualification will be determined. This will help ensure efficient tax administration and prevent taxpayer confusion.

Fifth, the Department notes that a government agency is only deemed to be a taxpayer for employment tax (wage withholding) purposes. As such, subsection (l), which prohibits a government from claiming the credit, is not necessary.

Finally, the Department notes that the measure’s effective date was amended so that the changes to sections 235-12.5(a)(2)(A) and 235-12.5(a)(3)(C), HRS, take effect upon approval while the rest of the measure applies to taxable years beginning after December 31, 2019. In order to avoid taxpayer confusion and promote administrative efficiency, the Department respectfully requests that Section 5 be amended to restore the entire measure’s original applicability to taxable years beginning after December 31, 2019. This will allow the Department sufficient time to make the necessary form, instruction, and computer system changes.

Thank you for the opportunity to provide comments.



LATE

SENATE COMMITTEE ON WAYS AND MEANS

February 19, 2019, 3:15 P.M.
(*Testimony is 3 pages long*)

TESTIMONY IN OPPOSITION TO SB 1163 SD1

Aloha Chair Dela Cruz and Members of the Committee:

The Alliance for Solar Choice (TASC) strongly opposes SB 1163 SD1. This bill would cut most of caps to the existing renewable energy tax credit in half starting next year, causing a major disruption to an industry already dealing with turmoil. This would compound the 22% reduction in Hawaii solar jobs that occurred in 2017 and a similar reduction that occurred in 2016,¹ due to the elimination of net energy metering in Hawaii. To the extent this bill moves forward, TASC recommends restoring the existing caps that were amended on page 9 and 10, so as to avoid significant market disruption and a loss of confidence in Hawaii's clean energy commitment.

A key driver in Hawaii's transformation to 100% clean energy is the availability of financing. Hawaii's renewable energy income tax credit is an important factor in the ability of residents to achieve their goals to produce clean, renewable energy through the installation of a rooftop solar and storage system, and, at the same time, to benefit financially by reducing their electric bills for dirty, fossil-fuel generated energy.

Rooftop solar benefits all Hawaii residents. Over the past several years, the availability of financing has allowed low to moderate income residents to install rooftop solar from Aiea to Wahiawa. This is no longer a transition just benefitting a small number of people: over one in three homes in Hawaii now has rooftop solar. It has become ubiquitous. Further, rooftop solar has helped Hawaii save billions of dollars by reducing the amount of dirty fossil-fuels imported into the state, money which can be reinvested in Hawaii's local economy.

While the renewable energy tax credit could be weaned down over time, such a reduction must be coordinated with Hawaii's clean energy goals and be fair to the remaining residents who haven't had a chance yet to adopt rooftop solar. The goals of the renewable energy tax credit haven't really changed:

¹ The National Solar Jobs Census 2019 is available at <https://www.thesolarfoundation.org/national/> (last checked February 18, 2018).

Hawaii's dependence on petroleum for about ninety per cent of its energy needs is more than any other state in the nation. This makes the State extremely vulnerable to any oil embargo, supply disruption, international market dysfunction, and many other factors beyond the control of the State. Furthermore, the continued consumption of conventional petroleum fuel negatively impacts the environment. At the same time, Hawaii has among the most abundant renewable energy resources in the world, in the form of solar, geothermal, wind, biomass, and ocean energy assets.

Act 240 (2006). Further "increased . . . use of renewable energy resources would increase Hawaii's energy self-sufficiency, achieving broad societal benefits, including increased energy security, resistance to increases in oil prices, environmental sustainability, economic development, and job creation." *Id.*

Hawaii residents strongly support more rooftop solar. A 2015 SMS poll demonstrated that 77% of Hawaii residents "strongly support" and 20% "somewhat support" more rooftop solar in Hawaii. Only 1 per cent "somewhat oppose" and no one polled "strongly opposed" more rooftop solar. Few issues have ever resulted in such an unanimous concurrence among Hawaii residents.

Sudden changes and general uncertainty about the the renewable energy tax credit has a direct and adverse impact on the solar industry. To the extent installations take at least 4-6 months, changes that occur within six months can have an immediate and adverse impact on the solar industry and residents ability to choose cleaner energy. Here, slashing the primary restraint — the existing cap on the renewable energy income tax credit — in half, will have an immediate impact the ability of residents to choose cleaner energy and the price of such systems.

This bill reduces federal assistance towards Hawaii's clean energy goals. The federal income tax credit is scheduled to step down at the end of this year,² thus meaning (1) there will already be a significant reduction in the incentive to solar adoption and (2) the instant bill would reduce the amount of federal money flowing into Hawaii by simultaneously reducing state assistance (the total net incentive is significantly lower). Any action that slows clean energy adoption — such as an unreasonable slashing of the the cap — is adverse to Hawaii residents. Assuming we will achieve our 100% clean energy goals, this bill means it will be solely borne by Hawaii residents and not supported as much with federal money.

² See, e.g., <https://www.energy.gov/savings/residential-renewable-energy-tax-credit>

TASC welcomes a discussion about the future of Hawaii's solar tax credit. Nonetheless, in light of the federal income tax credit step down, this is not an ideal year for that discussion. We suggest deferring this matter until next year.

Mahalo for the opportunity to testify.

LATE

SB-1163-SD-1

Submitted on: 2/18/2019 12:14:25 PM

Testimony for WAM on 2/19/2019 9:30:00 AM

Submitted By	Organization	Testifier Position	Present at Hearing
Andrea Quinn	Individual	Support	No

Comments:

Dear Honorable Committee Members:

Please support SB1163.

Solar and wind energy are helping Hawaii to become more independent from extraneous energy sources and consequently making us safer from the myriad geopolitical influences that could potentially threaten our well-being and quality of life through disruption of those energy sources.

Additionally, climate change is already occurring and Hawai'i stands to lose much in terms of sea level rise and coral reef destruction. We need to be a leader in energy efficiency.

Thank you for the opportunity to present my testimony.

Andrea Quinn

Kihei

COMMITTEE ON WAYS AND MEANS
Senator Donovan M. Dela Cruz, Chair
Senator Gilbert S.C. Keith-Agaran, Vice Chair

DATE: Tuesday, February 19, 2019
TIME: 9:30 AM
PLACE: Conference Room 211

SB1163 RELATING TO RENEWABLE ENERGY

Chair Dela Cruz, Vice Chair Keith-Agaran, and Members of the Committee:

We **support** the intent of SB1163 and offer **comments in the area of multi-family residential properties**:

Adon Renewables is a local renewable energy development firm supported by **Tokyo Electric Power (TEPCO)**, the 5th largest power utility in the world and **Adon Construction Inc.**, a company that has been doing business in Hawaii for 40 years.

One of the areas we specialize in is providing renewable energy to low income, affordable housing and senior housing. We have provided renewable energy for over 2,000 multi-family dwelling units over the last 10 years.

Multi-family residential properties have provided a source of affordable housing for low-income and senior residents in our state.

Hawai'i has some of the highest housing costs in the country, According to the state of hawaii, dashboard data source,¹ generally, housing is considered "affordable" when costs are at or below 30% of household income. Families who pay more than 30% of their income for housing are considered cost burdened and may have difficulty affording other necessities (HUD, 2012). It is important to note that single-family housing is not desirable in Hawai'i due to limited land mass as it creates urban sprawl. To increase the affordability in housing is to fully utilize urban areas and construct and maintain multi-unit affordable housing that remains at 30% of resident annual monthly income (AMI).

To achieve a goal of more affordability for renters and homeowners, there is a strong need to address housing equity and communities with socioeconomic vulnerabilities while also recognizing the diverse range of community characteristics across the state. According to data from the University of Hawai'i's Center on the Family, 47% of families receiving houseless

¹ <https://dashboard.hawaii.gov/stat/goals/5xhf-begg/ezet-axai/88dr-z9q5>

outreach services are Native Hawaiians. In addition, housing affordability is often linked to concerns over homelessness or houselessness.

Energy costs also provide for a burden to these same income-challenged families. In spite of this recognition, the renewable energy policy of the state has done little to provide for parity or equity of this group as compared to the households that can afford solar on their rooftop. Today, the multi-family residential properties qualify for a mere fraction of the solar tax credits in HRS Section 235-12.6, with a cap of \$350 per unit per system for multi-residential property; while the solar system cap for single-family residential property provides for \$5,000. These tax credits, in the multi-family dwelling scenario are passed on in the form of rate savings to the consumer. Therefore, any savings due to state tax credits, directly benefit this socioeconomic demographic.

We recommend that the proposed statute changes affecting solar tax credits or adding storage tax credits for multi-family residential property, carry further provisions that include if a property is classified as low-income, affordable housing, or senior housing shall carry a credit of

\$700 per multi-family unit per system for solar plus energy storage

Thank you for the opportunity to testify.



TESTIMONY OPPOSING SB 1163 SD1

**being heard by the Senate Committee on Ways and Means
on February 19, 2019 at 9:30 AM**

Room 211

Aloha Chair Dela Cruz and Members of the Committee:

Tesla appreciates the opportunity to submit this testimony expressing our profound concerns with SB 1163 SD1. Although Tesla previously supported the prior version of the bill, unfortunately the amendments made to this measure have forced us to reconsider, and ultimately reverse our position. By eliminating the tax credit for storage and dramatically reducing the value of the tax credit for solar, the bill, in its current form, threatens to disrupt an industry that employs thousands of people in meaningful work advancing key State policy goals. These include the State's efforts to transition to 100% renewable energy by 2045, as well as efforts to improve the resiliency of Hawaii's energy system.

Tesla's mission is to accelerate the world's transition to sustainable energy through the widespread adoption of electric vehicles and the deployment of sustainable energy solutions like storage and solar. As the penetration of variable renewable resources, most notably solar, has increased in the state, it is appropriate to take steps to actively support the deployment of energy storage technologies recognizing the essential role this technology plays in integrating renewable energy onto the electricity grid. Energy storage in effect transforms an "as-available" resource, i.e. one that produces energy based on when the wind blows or sun shines, into a resource that can be dispatched based on the needs of the energy system.

Energy storage can also benefit the grid in a number of other ways. Leveraged through well-designed programs, energy storage offers the potential to significantly improve overall grid resiliency and efficiency and can serve as an alternative to costly investments in distribution and transmission infrastructure by storing and delivering power in transmission or distribution-constrained areas during times of grid congestion.

When initially introduced, SB 1163 sought to expand the clean energy technologies supported by the tax credit to include energy storage. To mitigate any incremental budgetary impacts this expanded eligibility might engender, the bill also proposed to reduce the tax credit rate over time, such that the rate would decline from the current 35% rate to 15% over a six-year period. While one could quibble with the specific percentages and annual declines in the tax credit rate, from a policy standpoint, Tesla strongly supported this basic structure, recognizing the increasing importance of energy storage in achieving Hawaii's long-term vision of a carbon-free, sustainable and resilient energy system, while at the same time embracing the basic notion of gradualism so as not to pull the rug out from under the solar industry.



The amended version of the measure wholly eliminates a standalone storage tax credit, something that Tesla understood had been the primary focus of the bill as introduced. It also dramatically accelerates the ramp down in the tax credit rate for the set of currently eligible technologies, including solar. Even more problematic is the proposed halving of the per-system cap that solar systems are eligible to receive. For residential solar systems, the cap would be reduced from \$5000 per system to \$2500. For a typical residential system, and assuming a generic installed cost of solar at approximately \$4 per watt, the current caps are already largely binding and yield an effective tax credit rate of approximately 28%. The proposed reduction in the per system caps would immediately reduce this to 17%. From the perspective of the customer, this is the equivalent of increasing the costs of a solar system by approximately \$3500.¹ These adverse changes will unquestionably reduce demand for solar and, with no offsetting benefit in terms of providing support for storage, threaten to do irreparable harm to the solar industry and the people it employs. A similar conclusion would apply to commercial solar systems under the SD1 amendments. It would also represent a setback to Hawaii's efforts to eliminate the state's reliance on fossil fuels.

Tesla further finds it difficult to reconcile the dramatic scaling back of the solar tax credit, coupled with the lack of support for storage, with the direction from the legislature as articulated through HB 2110 last year to advance the development of microgrids in the service of promoting a more resilient grid. Solar combined with storage represents one of the fundamental building blocks of microgrids, particularly in circumstances where fossil fuels are costly and contrary to other state policy objectives. To dramatically cut the solar tax credit and offering nothing in support of storage seems at cross purposes with the State's ambitions to support microgrid development.

For all of the foregoing reasons, Tesla cannot support SB 1163 in its current form and asks the Committee to reject or defer this measure. At a minimum, such dramatic cuts to a key state incentive program should not be pursued in the absence of a comprehensive evaluation of the implications on solar development, jobs and the State's clean energy goals.

Thank you for the opportunity to submit this testimony.

¹ As implemented by the Department of Taxation, a 7.5 system would receive two tax credits. The first tax credit, associated with the first 5 kW of the project, considered one full system by the DoTax, would be the lesser of \$5000 or 35% of the cost basis. Assuming \$4/watt the cost basis would be \$20,000 (\$4/watt * 5000 watts), the cap would be binding. The first 5 kW would therefore receive \$5000 in tax credit value. The second tax credit, associated with the remaining 2.5 kW of the project, considered a partial system, would receive \$3500 (35% * \$4/watt * 2500 watts). In the case of the second partial system, the cap is not binding and the project would receive the full 35% of the cost basis. Thus the project as a whole would receive \$8500 in tax credit value, equal to 28% of the total project cost of \$30,000. If the caps are halved as proposed, the cap would be binding for both the full and partial system and yield a credit value of \$5000, or 17% of the project cost.

SB-1163-SD-1

Submitted on: 2/18/2019 9:18:25 AM

Testimony for WAM on 2/19/2019 9:30:00 AM

Submitted By	Organization	Testifier Position	Present at Hearing
Melodie Aduja	Testifying for O`ahu County Committee on Legislative Priorities of the Democratic Party of Hawai`i	Support	No

Comments:

**TESTIMONY BEFORE THE SENATE COMMITTEE ON
WAYS AND MEANS**

SB 1163, SD1

Relating to Renewable Energy

Decision-Making Only

Tuesday, February 19, 2019

9:30 AM, Agenda Item #31

State Capitol, Conference Room 211

Written Testimony in Support with Requested Amendments

Kaiulani Shinsato
Director, Distributed Energy Resources
Hawaiian Electric Company, Inc.

Chair Dela Cruz, Vice Chair Keith-Agaran, and Members of the Committee:

My name is Kaiulani Shinsato and I am testifying on behalf of Hawaiian Electric Company, Inc. and its subsidiaries, Hawai'i Electric Light Company, Inc. and Maui Electric Company, Limited (collectively, the "Hawaiian Electric Companies"). The Hawaiian Electric Companies **support of SB 1163, SD1, Relating to Renewable Energy and request the following recommendations** for several reasons:

First, SB 1163, SD1 incorporates a requirement that renewable energy technologies must be "grid-connected" as a condition to receive the income tax credits. To reach the State's ambitious goal of 100% clean energy by 2045, all large-scale *and distributed resources at customers' premises* will need to be connected to the grid and contributing in coordination as a grid resource. Likewise, the Hawaiian Electric Companies will soon be broadening its offering of demand response programs for customers; however, demand response as a resource can only benefit customers and add value to the electric system if the renewable energy systems are grid-connected.

Thus, the Companies support the addition of this requirement in SB 1163, SD1.

However, for clarity, the Companies recommend that the definition of “grid-connected” on page 12, lines 7-10, be revised as follows:

“‘Grid-connected’ means that the individual or corporate taxpayer has obtained an approved interconnection agreement from an electric utility for the solar energy system and the system is connected and normally operated in parallel with the electric grid [~~or whose facility does not have an existing tie to the electric grid~~].”

Otherwise, as currently drafted, the definition appears to include systems that are off-grid.

Second, the Companies support the addition of a tax credit for utility solar energy systems procured by an electric utility under a power purchase agreement (PPA) and approved by the Public Utilities Commission (PUC) in the maximum amount of \$750,000. Utility scale solar should be eligible for tax credits since the cost savings will be passed on to all customers and will therefore benefit all customers in aggregate versus only those customers who choose to invest in private rooftop solar. For the same reason, utility-owned solar energy systems are beneficial because tax credits will be passed on to all customers. For example, the West Loch solar project, which will be owned and operated by Hawaiian Electric, represented the lowest pricing for a solar energy project at the time the project was submitted for approval to the PUC. These types of projects should not be excluded from the bill. Lastly, the Companies additionally recommend that the language of the bill be clarified to state that the increased cap for utility solar energy systems should not be applied to PPAs that have already been executed upon the effective date of the bill. The pricing for these PPAs were already negotiated and finalized, such that any additional tax credits would only benefit the developers and would not flow back to customers through lower pricing.

Thus, the Companies recommend that the language in section (b)(5) on page 10, lines 1-3, be further clarified to include utility-owned solar energy systems and the applicability of the cap, as follows:

“\$750,000 per utility solar energy system owned by an electric utility or procured by an electric utility under a power purchase agreement and approved by the public utilities commission provided that such cap shall not apply to power purchase agreements already executed upon the effective date of this law.”

The Companies appreciate the amendments adopted in the SD1 version and support the increase in the tax credit from \$350 - \$700 per unit per grid-connected solar energy system for multi-family residential property classified as low-income, affordable housing, or senior housing. The Companies believe that as we seek to achieve the 100% renewable goal as a State, we cannot leave anyone behind. We should continuously find ways to ensure that all segments of the population have options to invest in, and benefit from, clean energy.

Additionally, given that solar costs have been rapidly declining, the Companies support the bill's scale down of tax credits and termination in 2026.

Thank you for this opportunity to testify in support of S.B. 1163, SD1 and for considering our requested amendments.

TAX FOUNDATION OF HAWAII

126 Queen Street, Suite 304

Honolulu, Hawaii 96813 Tel. 536-4587

SUBJECT: INCOME, Renewable Energy Technologies Credit

BILL NUMBER: SB 1163, SD-1

INTRODUCED BY: Senate Energy, Economic Development, and Tourism

EXECUTIVE SUMMARY: Amends the renewable energy technologies income tax credit to change limitations for certain technology types. Provides increased caps for photovoltaic property that is grid-connected and incorporates energy storage system. 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, to be retitled the solar energy, wind energy, and commercial seawater air conditioning system income tax credit, to allow credits for each energy system, as follows:

For each solar energy system 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 system for single-family residential property; (B) \$350 per unit per solar energy system for multi-family residential property; (C) \$700 per unit per solar energy system for multi-family residential property classified as low-income, affordable housing, or senior housing; and (D) \$250,000 per solar energy system for commercial property.

For each grid-connected solar energy system used primarily to generate electricity and is installed and first placed in service in the State by a taxpayer during the taxable year or is approved in the taxable year and is placed in the following taxable year, the credit is a certain percentage of the basis up to the applicable cap amount, which is determined as follows: (A) \$2,500 per solar energy system 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 25% of basis or \$2,250, whichever is less; (B) \$350 per unit per solar energy system for multi-family residential property; (C) \$700 per unit per solar energy system for multi-family residential property classified as low-income, affordable housing, or senior housing; (D) \$250,000 per solar energy system for commercial property; and (E) \$750,000 per utility solar energy system procured by an electric utility under a power purchase agreement and approved by the public utilities commission. The credit rate is 35% for calendar year 2020, 30% for calendar year 2021, 25% for calendar year 2022, 20% for calendar year 2023, 15% for calendar year 2024, 10% for calendar year 2025, and 5% for calendar year 2026.

A grid-connected wind energy system 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 system 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 system for multi-family residential property; and (C) \$500,000 per wind energy system for commercial property.

For each commercial seawater air conditioning system, as defined in this section, twenty percent of the basis of connecting the commercial seawater air conditioning system to the seawater district cooling system up to the applicable cap amount of \$100,000.

Defines “basis” on which the credit is based as costs related to the solar energy, wind energy, or energy storage system, including accessories, costs related to the solar energy, wind energy, or commercial seawater air conditioning system under subsection (a), including accessories, installation, energy storage, and cost of construction to connect to a seawater air conditioning district cooling system, but does not include the cost of consumer incentive premiums unrelated to the operation of the energy system or offered with the sale of the energy system 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 a solar energy, wind energy, or commercial seawater air conditioning system, such as the reroofing of single-family residential property, multi-family residential property, or commercial property, shall not constitute a part of the basis for the purpose of this section; provided that costs incurred for the physical support of the solar or wind energy system, 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 “Commercial seawater air conditioning system” as a building air conditioning system for commercial, office or residential buildings connected to a seawater air conditioning district cooling system.

Defines “first placed in service” the same as in Treas. Reg. section 1.167(a)-11(e)(1).

Defines “grid-connected” as where the individual or corporate taxpayer has obtained an approved interconnection agreement from an electric utility for the solar energy system or whose facility does not have an existing tie to the electric grid.

Defines “seawater air conditioning district cooling system” as an identifiable facility, equipment, apparatus, or the like that utilizes naturally occurring cold, deep seawater as its primary source of cooling for production of chilled water for distribution to multiple commercial air conditioning systems.

Defines “solar or wind energy system” 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 system is completed by the taxpayer; or (2) the solar or wind energy system is acquired by the taxpayer if the original use of the solar or wind energy system 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, 2026.

Makes technical and conforming changes.

EFFECTIVE DATE: Taxable years beginning after December 31, 2019.

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. The credit as currently drafted is complex.

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

Re: SB 1163, SD-1
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appropriation, or adding on to an existing program such as Hawaii Energy, may be a far less costly method to accomplish the same thing.

Digested 2/15/2019



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Testimony on
S.B. 1163, S.D. 1
RELATING TO RENEWABLE ENERGY TAX CREDITS

Before the
State Senate
COMMITTEE ON WAYS AND MEANS
Tuesday, February 19, 2019

By
Eric Masutomi, CEO and President
Honolulu Seawater Air Conditioning, LLC

Chair Dela Cruz, Vice Chair Keith-Agaron and Members of the Committee:

Honolulu Seawater Air Conditioning (HSWAC) strongly supports this measure which, among other changes, would provide for a renewable energy tax credit income tax credit for building owners connecting to a seawater air conditioning district cooling system.

The significance of seawater as a renewable energy resource cannot be understated. HSWAC's Downtown Honolulu District Cooling System, alone, is the largest energy efficiency project to be undertaken in the State. When it begins operation, HSWAC's district cooling system will eliminate the need for 178,000 barrels of oil per year, saving enough electricity to power more than 10,000 homes annually - equivalent, by comparison, to 142,200 solar panels. The system will provide an alternative to using imported fossil fuels to cool downtown Honolulu, which will decrease the island's environmental footprint and the state's oil dependency.

Deepwater district cooling systems have been successfully implemented in numerous localities throughout the U.S., Canada and Europe. Despite this proven record of success, our experience has shown that when district energy systems such as that being developed by HSWAC are introduced in a community, potential customers are frequently wary about the costs of converting to the new system, the risk of higher costs in the initial years of operation and the uncertainties of adapting to a new system. As in the case of solar and wind technology, the availability of such credits is effective in not only ameliorating such concerns, but in accelerating the State's transition to a renewable energy future.

Such credits will assist potential customers of seawater air conditioning district cooling systems in making the critical decision to eliminate existing inefficient cooling systems (currently responsible for more than forty percent of a building's electricity consumption) in favor of utilizing a district cooling system that takes advantage Hawaii's abundant surrounding ocean waters. With the potential to reduce electricity consumption used for air conditioning by up to 75%, this technology promises to significantly contribute to the State's sustainability objectives and reduce our dependence on imported fossil fuels.

Discounting the substantial energy and environmental benefits associated with seawater cooling, from a cost-benefit standpoint, the seawater cooling system credits that might be allowed are modest when

weighed against the projected economic benefits, including: a) over \$300 million in construction spending, b) 1,348 construction-related jobs, and c) over \$55 million in net increase in State revenues over 25 years from GET and income taxes.ⁱ In addition, it would create long-term employment opportunities and establish the State as a leading authority on the development and installation of seawater air conditioning systems throughout the Asia-Pacific region. Other local economic benefits would accrue from money that stays in Hawaii and is not exported outside the State to purchase oil.

The State Legislature should be applauded for its foresight in the establishing these renewable energy tax credits to promote Hawaii's transition to a clean energy future. Expanding the eligibility of the credits to users of seawater cooling technology, as provided in this measure, is fully consistent with this objective.

ⁱ Source: Analysis of Honolulu Seawater Air Conditioning Economic Benefits, John M. Knox and Associates Inc., February 15, 2017.

SB-1163-SD-1

Submitted on: 2/18/2019 5:53:01 AM

Testimony for WAM on 2/19/2019 9:30:00 AM

Submitted By	Organization	Testifier Position	Present at Hearing
Eric Schiff	Individual	Support	No

Comments:

I strongly support SB1163.



LATE

Email: communications@ulupono.com

SENATE COMMITTEE ON WAYS & MEANS
Tuesday, February 19, 2019 — 9:30 a.m. — Room 211

Ulupono Initiative Provides Comments on SB 1163 SD 1 with Amendments, Relating to Renewable Energy

Dear Chair Dela Cruz, Vice Chair Keith-Agaran, and Members of the Committee:

My name is Murray Clay and I am Managing Partner of the 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 better manage waste and fresh water resources. 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 provides comments on SB 1163 SD 1 with amendments, which reduces the renewable energy systems tax credit.

The prior version of this measure includes an energy storage component and we feel this needs to be added back in. Energy storage is the next key piece for Hawai'i to meet its 100% renewable portfolio standard goal. Energy storage systems allow for increased adoption of all types of renewable energy generation and improve the resilience of the electrical grid.

Prior versions of this bill, including from past legislative sessions, included a tax credit for energy storage that was paid for through an equitable reduction in the solar photovoltaic tax credit. We believe this is an effective way to fund the tax credit for energy storage.

Ulupono believes that SB 1163 SD 1 should adhere to all the following good policy principles.

Renewable Energy Subsidy 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.

Investing in a Sustainable Hawai'i

Community solar, which specifically targets townhouses and apartments, is only just starting to be deployed. This program would help low to moderate-income households. Therefore, reducing the solar photovoltaic subsidy now would hurt working class homeowners who were previously not able to access the benefits of solar energy.

- 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 intended 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).
- With the federal tax credit for solar photovoltaic system still in effect, Hawai'i is losing out on federal funding if solar systems are not being purchased locally. However, to build more solar, Hawai'i needs energy storage.

We would also propose that any ramp down of the existing solar photovoltaic tax credit to start in 2021, thereby giving time to the solar industry and its customers to adjust their plans accordingly as some customers have already made financial commitments to having systems installed with the understanding that this credit would be in place.

As Hawai'i's energy issues become increasingly 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



LATE

Hawaii Solar Energy Association
Serving Hawaii Since 1977

**TESTIMONY OF THE HAWAII SOLAR ENERGY ASSOCIATION
IN REGARD TO SB 1163 SD1, RELATING TO RENEWABLE ENERGY
BEFORE THE
SENATE COMMITTEE ON WAYS AND MEANS
ON
TUESDAY, FEBRUARY 19, 2019**

Chair Dela Cruz, Vice-Chair Keith-Agaran, 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 OPPOSES SB1163 SD1. This measure replaces the current renewable energy technology systems tax credit with tax credits for solar or wind energy systems and energy storage systems. Applies to taxable years beginning after 12/31/2019.

The HSEA has generally been in favor of tax credits for energy storage and renewable energy systems as a way for the state to direct customer behavior towards it's renewable energy goals. This has been generally successful, and Hawaii enjoys one of the highest amounts of renewable energy installed per capita than any other state.

This particular measure, however, has been deliberated and debated for almost ten years in some form or another. There appears to be no broad consensus on what exactly an energy storage tax credit might look like by either this legislative body, the state agencies responsible for administering it, or the industry and consumers who will benefit from it directly. To date, the HSEA has not seen any significant change in these varying perspectives that suggest a different outcome this legislative session.

This ongoing debate has noticeable impacts on the industry, There was a drop in installed and permitted systems in the months during the back and forth about a similar tax credit measure in prior years. Solar developers sometimes are forced to return to the negotiating table on projects that have a longer development cycle than the legislative session as it is often unclear what changes will occur that alter the financing of projects. This has the unintended effect of slowing Hawaii's progress towards 100% renewable by 2045.

Additionally, the federal solar investment tax credit will be step down for residential and commercial projects at the end of 2019. This step down is already creating some uncertainty in the market. Further complicating this by introducing this particular step-



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down structure which will in all likelihood not be passed in its current form, if at all, by the end of the 2019 session would likely further stress a market that craves stability.

To reiterate above, the HSEA supports a tax credit for energy storage systems but we recommend that one of the following changes be made to this particular bill in light of the circumstances above:

1. **The legislature defer this measure** until next year in order to determine the impacts of the federal tax credit step down on the market, and allow time for the industry and consumers to reexamine the implications of this particular bill.
2. Leave the existing renewable tax credit alone and create a **stand-alone energy storage tax credit** with a step down structure, geared towards serving lower and middle income consumers.

The recent amendments in the SD1 draft of this bill further detract from its purpose. Tax credits are a tool, and under the current language this bill would slow state's progress towards 100% renewable. By cutting the single housing tax credit in half, the legislature has effectively gutted any ability that this bill might have to serve low and middle income communities.

Current interconnect DER systems in almost all cases require a storage system, thus the overall cost of a system is higher in Hawaii than in other states. Furthermore, over half of the installed systems in this state are done so through leasing and PPA models, thus the DoTax data on claimed tax credits (which is two years lagging) does not reflect the market penetration into LMI areas and the legislature, which assumes that this credit serves only higher income folks, is incorrect.

If the legislature wishes to serve more LMI communities by restructuring this measure to skew greater benefit towards these communities, than we welcome those future amendments and would be happy to offer any assistance in the matter. The current language as drafted, however, does not accomplish this.

The HSEA **OPPOSES SB 1163 SD1**, and we ask the legislature to defer this measure unless one of the above actions are taken.

Thank you for the opportunity to testify.