



HAWAII STATE ENERGY OFFICE STATE OF HAWAII

DAVID Y. IGE
GOVERNOR

SCOTT J. GLENN
CHIEF ENERGY OFFICER

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Testimony of SCOTT J. GLENN, Chief Energy Officer

before the HOUSE COMMITTEE ON FINANCE

Wednesday, April 6, 2022
1:30 PM
State Capitol, Conference Room 308 & Videoconference

COMMENTS SB 2511, SD2, HD1 RELATING TO TAXATION.

Chair Luke, Vice Chair Yamashita, and Members of the Committee, the Hawai'i State Energy Office (HSEO) offers comments on SB 2511, SD2, HD1, which expands the renewable energy technologies income tax credit to include firm renewable energy systems, caps the total amount of tax credits for each firm renewable energy system at \$750,000, and sunsets the credit on December 31, 2045.

To the extent that taxes and tax credits express the desire of the Legislature to encourage, discourage, or accelerate the accomplishment of state objectives, it is appropriate to adjust incentives for certain renewable energy capabilities such as a desired level of availability and dispatchability (e.g., "firm") in the Renewable Energy Technologies Income Tax Credit. HSEO supports the use of tax credits as an important tool to achieve the State's energy goals.

HSEO appreciates that in SB2511, HD1, "renewable energy" is defined and refers to the definition of renewable energy contained in [Section 269-91](#), Hawai'i Revised Statutes.¹

¹ "Renewable energy" means energy generated or produced using the following sources: (1) Wind; (2) The sun; (3) Falling water; (4) Biogas, including landfill and sewage-based digester gas; (5) Geothermal; (6) Ocean water, currents, and waves, including ocean thermal energy conversion; (7) Biomass, including biomass crops, agricultural and animal residues and wastes, and municipal solid waste and other solid waste; (8) Biofuels; and (9) Hydrogen produced from renewable energy sources. In the same section, "Biofuels" means liquid or gaseous fuels produced from organic sources such as biomass crops, agricultural residues and oil crops, such as palm oil, canola oil, soybean oil, waste cooking oil, grease, and food wastes, animal residues and wastes, and sewage and landfill wastes.

HSEO notes that a “firm” generation facility (such as a generator that burns fuel) can, if combined with a system that uses energy available on-site, operate for a longer period in the event of a fuel shortage than one that is purely dependent on receipt of shipments of fuel. In periods of normal operation, fuel supplies last longer when supported by energy production by wind and solar (with batteries firming and smoothing energy output). Therefore, hybrid systems can also meet the definition of “firm.”

HSEO notes that the effects of the minimum size threshold on the use of the credit, or on project sizing, are unknown.

HSEO defers to the appropriate agencies for implementation and fiscal impact.

Thank you for the opportunity to testify.

DAVID Y. IGE
GOVERNOR



CRAIG K. HIRAI
DIRECTOR

GLORIA CHANG
DEPUTY DIRECTOR

EMPLOYEES' RETIREMENT SYSTEM
HAWAII EMPLOYER-UNION HEALTH BENEFITS TRUST FUND
OFFICE OF THE PUBLIC DEFENDER

STATE OF HAWAII
DEPARTMENT OF BUDGET AND FINANCE
P.O. BOX 150
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ADMINISTRATIVE AND RESEARCH OFFICE
BUDGET, PROGRAM PLANNING AND
MANAGEMENT DIVISION
FINANCIAL ADMINISTRATION DIVISION
OFFICE OF FEDERAL AWARDS MANAGEMENT (OFAM)

WRITTEN ONLY
TESTIMONY BY CRAIG K. HIRAI
DIRECTOR, DEPARTMENT OF BUDGET AND FINANCE
TO THE HOUSE COMMITTEE ON FINANCE
ON
SENATE BILL NO. 2511, S.D. 2, H.D. 1

April 6, 2022
1:30 p.m.
Room 308 and Videoconference

RELATING TO TAXATION

The Department of Budget and Finance (B&F) offers comments on this bill.

Senate Bill No. 2511, S.D. 2, H.D. 1, amends Section 235-12.5, HRS, by expanding the Renewable Energy Technologies Income Tax Credit to include firm renewable energy systems. The amount taxpayers may claim for firm renewable energy systems would be set at the lesser amount of either an unspecified percent of the system's total cost or \$750,000, provided that the system has a total output of at least 1,000 kilowatts of alternating current.

B&F notes that the federal American Rescue Plan (ARP) Act restricts states from using ARP Coronavirus State Fiscal Recovery Funds (CSFRF) to directly or indirectly offset a reduction in net tax revenue resulting from a change in law, regulation, or administrative interpretation beginning on March 3, 2021, through the last day of the fiscal year in which the CSFRF have been spent. If a state cuts taxes during this period, it must demonstrate how it paid for the tax cuts from sources other than the CSFRF, such as:

- By enacting policies to raise other sources of revenue;
- By cutting spending; or
- Through higher revenue due to economic growth.

If the CSFRF provided have been used to offset tax cuts, the amount used for this purpose must be repaid to the U.S. Treasury.

The U.S. Department of Treasury has issued rules governing how this restriction is to be administered. B&F will be working with the money committees of the Legislature to ensure that the State of Hawai'i complies with this ARP restriction.

Thank you for your consideration of our comments.

DAVID Y. IGE
GOVERNOR

JOSH GREEN M.D.
LT. GOVERNOR



ISAAC W. CHOY
DIRECTOR OF TAXATION

STATE OF HAWAII
DEPARTMENT OF TAXATION
P.O. BOX 259
HONOLULU, HAWAII 96809
PHONE NO: (808) 587-1540
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To: The Honorable Sylvia Luke, Chair;
The Honorable Kyle T. Yamashita, Vice Chair;
and Members of the House Committee on Finance

From: Isaac W. Choy, Director
Department of Taxation

Date: Wednesday, April 6, 2022
Time: 1:30 P.M.
Place: Via Video Conference, State Capitol

Re: S.B. 2511, S.D. 2, H.D. 1, Relating to Taxation

The Department of Taxation (Department) opposes S.B. 2511, S.D. 2, H.D. 1, in its current form and offers the following comments for the committee's consideration.

S.B. 2511, S.D. 2, H.D. 1, expands the Renewable Energy Technologies Income Tax credit (RETITC) under section 235-12.5, Hawaii Revised Statutes (HRS), by adding a new category of system that is eligible for the credit. For each "firm renewable energy system" installed and placed in service during a taxable year before January 1, 2046, the credit is equal to an unspecified percentage of actual costs or the cap amount of \$750,000, whichever is less, as long as the firm renewable energy system has a total output capacity of at least one thousand kilowatts per system of alternating current. "Firm renewable energy system is defined as "a renewable energy technology system that is always available on the demand of the energy system's operator, consistent with the terms of an approved power purchase agreement." This measure has a defective effective date of July 1, 2050, and otherwise applies to taxable years beginning after December 31, 2022.

First, the Department notes that this measure further exacerbates the inherent problem with the RETITC in that it allows a credit per system. Instead of continuously amending this credit based on arbitrary cap amounts and minimum energy production thresholds, which have historically caused significant administrative difficulties, the Department strongly recommends amending the RETITC so that the credit amount is simply equal to a specific percentage of the actual cost, similar to the way the federal version of this credit is structured.¹ For example, the credit amount for a firm renewable energy system (regardless of size) could be set at ten per cent

¹ 26 U.S.C. § 48, *please see* "Renewable Energy Tax Credits" at https://www.energystar.gov/about/federal_tax_credits/renewable_energy_tax_credits for more information.

of the actual cost. This approach alleviates the need to specifically define what a “system” is for each type of installation.

Additionally, the Department has concerns about whether tax credits are effective in promoting the development of utility-scale firm renewable energy systems. It is the Department’s understanding that utility-scale projects need to be approved by the Public Utilities Commission (PUC) and that the PUC considers whether tax credits were claimed when it determines the appropriate rate of return. As such, the tax credit may not be necessary for these installations because their approved rate will be higher if no tax credit is claimed. The Department thus suggests that utility-scale firm renewable energy systems be excluded from the credit, like the exclusion for utility-scale solar energy systems. To accomplish this, paragraph (a)(3) may be amended to read as follows:

(3) For each firm renewable energy system: ten per cent of the actual cost; provided that no tax credit may be claimed for a firm renewable energy system that is five megawatts in total output capacity or larger and requires a power purchase agreement or other type of contract approved by the public utilities commission;

Second, the Department has concerns about the RETITC’s refundability provision in subsection (h) being applied to utility-scale firm renewable energy systems. This provision provides an exception to the thirty percent reduction requirement for individual taxpayers with adjusted gross incomes (AGI) below certain thresholds, or whose income is exempt under section 235-7(a)(2) or (3), HRS. The Department notes that this exception is appropriate for other RETITC categories where the credit is regularly generated and claimed by ordinary homeowners. Any tax credit for a utility-scale project, however, is unlikely to be claimed by ordinary homeowners, and even less likely to be claimed by a taxpayer with AGI below the given thresholds. Thus, the only taxpayers likely to use this provision are those with significant retirement income that is exempted under section 235-7(a)(2) or (3), HRS. As such, the Department strongly suggests the deletion of the amendment to subsection (h).

Third, the Department notes that even though the definition of “firm renewable energy system” includes availability and power purchase agreement requirements, there is still a significant overlap between what constitutes a “firm renewable energy system” and the RETITC’s definitions of other types of renewable energy technology systems. As utility-scale solar energy systems are currently excluded from the credit, this redundancy should be clarified. If the intent is to exclude solar and wind energy systems from the new credit, the definition of “firm renewable energy systems” may be amended to read as follows:

"Firm renewable energy system" means a renewable energy technology system that is:

- (1) Always available on the demand of the energy system's operator, at its contracted capacity, subject only to routine maintenance and emergency repairs; and
- (2) Not a solar or wind energy system as defined by this section.

Finally, it appears that the Committee on Energy and Environmental Protection deleted proposed language in Section 1 of S.D. 1 and S.D. 2 that would have amended section 235-12.5(i), HRS, to specify that taxpayers are prohibited from claiming additional tax credits on the costs used to claim the tax credit established in this measure. The Department respectfully urges that this language be reinstated as follows:

- (i) No other tax credit may be claimed under this chapter for the costs incurred in producing the renewable energy technology systems that are used to properly claim a tax credit under this section for the taxable year. No taxpayer shall be allowed a credit under this section for the portion of the renewable energy technology system required by section 196-6.5 that is installed and placed in service on any newly constructed single-family residential property authorized by a building permit issued on or after January 1, 2010.

Thank you for the opportunity to testify on this measure.

SB-2511-HD-1

Submitted on: 4/5/2022 12:23:05 AM

Testimony for FIN on 4/6/2022 1:30:00 PM

Submitted By	Organization	Testifier Position	Testify
Richard Ha	Sustainable Energy Hawaii	Support	Written Testimony Only

Comments:

Aloha Chair Luke and Committee members.

Sustainable Energy Hawaii (SEH) supports SB2511

it is good to see that Geothermal can also participate in tax credits.

Aloha

Richard Ha

President

Sustainable Energy Hawaii

Sustainable

SB-2511-HD-1

Submitted on: 4/5/2022 4:10:34 AM

Testimony for FIN on 4/6/2022 1:30:00 PM

Submitted By	Organization	Testifier Position	Testify
Christopher Dean	Recycle Hawaii and Clean the Pacific	Oppose	Remotely Via Zoom

Comments:

We would love to support this bill, but we can't. The only way we can support this bill is if there's a clearly written and permanent ban on all biomass electrical generation, particularly burning trees. Study after study proves that biomass is worse than coal for the environment. There are so many reasons why biomass is bad, they're too numerous to mention here. But if you're really interested, I would encourage you to contact me through Recycle Hawaii and I will be happy to discuss why burning things to stop the planet from heating up is a bad idea. The fundamental reason why biomass is not acceptable is because it is not carbon neutral, as the industry claims. Back when this industry first started, humanity was ignorant about the science behind biomass plants, now we know better. Biomass can never be carbon neutral because after you clear cut a forest, the land is a carbon emitter for decades. Then, even if the utility does follow through on their promise to replant the trees, they'll just cut them down again, long before they start to sequester CO2. So, here you have a forest that is storing carbon, you cut it down and burn it which releases tons of carbon into the atmosphere, while also turning land that was capturing carbon into land that's emitting carbon. Even the Amazon forest is a net carbon emitter now. Burning trees for energy is a lie, it's not sustainable, in fact, it's a death sentence.

You know what is a firm, reliable, sustainable source of energy? Solar energy with batteries, or gravity storage, pump storage, or hydrogen. We need a diversified solar energy grid with home and commercial rooftop solar. Energy can be stored on site at homes and businesses in batteries to level the base load. Utilities all across the country are already doing this. Buying electricity from citizens is cheaper for utilities than buying it from "peaker" plants or neighboring utilities, which is not an option for Hawaii. Bring back net metering for solar if you want a rapid transition away from fossil fuels. I know it goes against the status quo of "take from the many and give to the few" but we live in a democracy, which takes precedence over capitalism. You're job as an elected official is to do what's right for the majority of citizens, not the wealthy few. Net metering is an opportunity to put money in the pockets of the average citizen while simultaneously saving life on Earth from imminent and irreversible extinction. Now, utilities are going to argue that it's not fair to make customers who don't have solar, subsidize those that do. Yes it is fair. In a market economy, all utility customers have the option to switch to solar. If a customer doesn't want to subsidize other solar customers, then they should stop burning fossil fuels and put solar on their roof. In the end, when everyone is making more solar energy than they use, we'll have more energy for projects like making hydrogen as an export commodity. Net metering will be the biggest economic boon Hawaii has ever seen, dwarfing tourism, which is about to collapse, due to the loss of our beaches and beautiful natural

habitat. Remember, energy is the only thing there is. There is no matter, only energy and powering the world with solar is the only hope of survival. One thousand square miles of solar, powers the United States entire energy demand, including transportation. There's more than ten times that amount of developed land for solar, the cheapest and least destructive source of energy.



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April 6, 2022

HEARING BEFORE THE
HOUSE COMMITTEE ON FINANCE

TESTIMONY ON SB 2511, SD2, HD1
RELATING TO TAXATION

Conference Room 308 & Videoconference
1:30 PM

Aloha Chair Luke, Vice-Chair Yamashita, and Members of the Committee:

I am Brian Miyamoto, Executive Director of the Hawai'i Farm Bureau (HFB). Organized since 1948, the HFB is comprised of 1,800 farm family members statewide and serves as Hawai'i's voice of agriculture to protect, advocate and advance the social, economic, and educational interests of our diverse agricultural community.

The Hawai'i Farm Bureau supports SB 2511, SD2, HD1, which expands the renewable energy technologies income tax credit to include firm renewable energy systems.

Renewable energy is important to the State's energy goals. Firm renewable energy production using biofuels can play a critical role in helping Hawai'i reach the goal of one hundred percent renewable energy by 2045, help to diversify Hawai'i's economy and agricultural sector, reduce greenhouse gas emissions, and reduce our dependence on imported oil.

HFB supports the production of dedicated energy crops, crop residues, and agricultural wastes into economically and environmentally sustainable biofuels and value-added by-products such as livestock feed.

Thank you for this opportunity to testify on this important subject.



**TESTIMONY BEFORE THE HOUSE COMMITTEE ON
FINANCE**

S.B. 2511, S.D.2, H.D.1

Relating to Taxation

April 6, 2022

1:30 p.m., Agenda Item #15

Conference Room 308 & Videoconference

Rebecca Dayhuff Matsushima
Vice President, Resource Procurement
Hawaiian Electric Company, Inc.

Chair Luke, Vice Chair Yamashita and Members of the Committee,

My name is Rebecca Dayhuff Matsushima and I am testifying on behalf of Hawaiian Electric Company, Inc. (“Hawaiian Electric” or the “Company”) respectfully **in support** of S.B. 2511 S.D.2 H.D.1, Relating to Taxation, and **with recommended edits** for consideration.

H.D.1 amends S.B. 2511 S.D.2 by, among other things, (1) modifying the definition of a firm renewable energy system to mean “a renewable energy technology system that is always available on the demand of the energy system’s operator, consistent with the terms of an approved power purchase agreement”; (2) clarifying the definition of firm renewable energy systems with the insertion of a definition for renewable energy referencing Section 269-91 of the Hawai’i Revised Statutes; and (3) making the renewable energy technologies income tax credit unavailable for renewable energy technology systems that are installed and placed in service after December 31, 2045.

Firm generation is imperative to operate the electric system and ensure

reliability and resilience. Hawaiian Electric believes expanding the tax credit to cover firm renewable energy systems and setting the maximum credit at \$750,000 provides a strong incentive for an individual or organization to develop such a system, which ultimately helps Hawaiian Electric procure reasonable cost energy necessary to move toward our State's 100% RPS goals. As such, Hawaiian Electric supports the addition of a firm renewable energy credit to this statute.

Hawaiian Electric observes that the updated definition of "firm renewable energy system" in H.D.1 would be enhanced with a few modifications. Hawaiian Electric recommends changing "contract capacity" to "rated capacity" in the definition. This change more accurately describes the capacity of the facility. Hawaiian Electric also recommends removing from the definition, the language, "consistent with the terms of an power purchase agreement", as there may be instances where a power purchase agreement is not applicable. As such, **Hawaiian Electric recommends the following definition on page 6, lines 8-11:** "Firm renewable energy system" means a renewable energy technology system that is always available on the demand of the energy system's operator, at its rated capacity, subject only to routine maintenance and emergency repairs, ~~consistent with the terms of an approved power purchase agreement.~~

Hawaiian Electric supports the addition of a definition for "renewable energy." As the addition of the definition for "renewable energy" encompasses more than solar and wind energy sources, and a "renewable energy technology system" is the basis for this tax credit, **Hawaiian Electric suggests the following edit** to incorporate the definition of "renewable energy" into the definition of "renewable energy technology system":

On Page 6, starting on line 17, the definition of "renewable energy technology

system” in subsection (c) be amended as follows: “Renewable energy technology system” means a new system that captures and converts a renewable ~~source of~~ energy, within the meaning of Section 269-91., ~~such as solar or wind energy,~~ into:...

Thank you for this opportunity to comment on S.B. 2511 S.D.2, H.D.1.

TAX FOUNDATION OF HAWAII

126 Queen Street, Suite 305

Honolulu, Hawaii 96813 Tel. 536-4587

SUBJECT: INCOME, Tax Credit for Firm Renewable Energy Systems

BILL NUMBER: SB 2511 HD 1

INTRODUCED BY: House Committee on Consumer Protection & Commerce.

EXECUTIVE SUMMARY: Expands the renewable energy technologies income tax credit to include firm renewable energy systems. Caps the total amount of tax credits for each firm renewable energy system at \$750,000. Sunsets the renewable energy technologies income tax credit on 12/31/2045. Effective 7/1/2050. We suggest direct appropriations or subsidies so that (1) we know what we are paying for, and (2) we know the price.

SYNOPSIS: Amends section 235-12.5, HRS, to allow a credit of ___% of the actual cost, up to \$750,000, for a firm renewable energy system.

Defines a “firm renewable energy system” as a renewable energy technology system that is always available on the demand of the energy system's operator, consistent with the terms of an approved power purchase agreement.

Clarifies that subsections (g) and (h), which allow taxpayers to convert the credit to a refundable one (i) at a cost of 30% of the credit claimed, or (ii) for taxpayers with AGI of \$20,000 or less (\$40,000 or less if married filing jointly), at no cost.

Specifies that costs used to claim this credit shall not be used to claim any other credit under the Income Tax Law.

EFFECTIVE DATE: July 1, 2050; applicable to taxable years beginning after December 31, 2022.

STAFF COMMENTS: At present, the renewable energy technologies income tax credit provides incentives for construction and installation of solar and wind energy systems. These systems do not generate energy continuously, at least in theory, because the sun does set every day and the atmospheric wind conditions are variable. It is unclear what technologies are targeted by this proposed credit expansion – hydroelectric, ocean thermal, ocean wave, tidal, and geothermal come to mind – and it may be better to state the definition of a firm renewable energy system by more specifically describing the technologies intended so that disputes do not develop over whether a particular technology qualifies. It may be argued, for example, that garbage-to-energy technology such as H-POWER or burning of biomass qualifies, although the drafters might not have intended so because of secondary effects such as carbon dioxide emission.

It is also preferable to use direct appropriations or subsidies, rather than tax credits, to encourage development or use of these types of technologies because (1) we know what we are paying for, and (2) we know the price. A tax credit with an open-ended description of the creditable activity gives us neither.

As a technical matter, we suggest that some attention be paid to the provision that allows conversion of a nonrefundable credit to a refundable one. The provision as currently drafted allows nonresident partners in a partnership with little or no Hawaii source income (but perhaps with tons of income elsewhere) to make the election with no cost, while Hawaii resident partners presumably would have Hawaii source income and would need to give up 30% to make the credit refundable. We question whether that is what lawmakers intend.

Digested: 3/19/2022

SB-2511-HD-1

Submitted on: 4/5/2022 9:55:10 AM

Testimony for FIN on 4/6/2022 1:30:00 PM

Submitted By	Organization	Testifier Position	Testify
Robert Culbertson	Hawaii Forest Stewards	Oppose	Written Testimony Only

Comments:

Aloha Senators!

This bad bill is another 'Trojan Horse' for the electric industry!

We are in a climate emergency; we should not incentivize energy sources that harm the climate! Not all renewables are good for the environment. Firm renewable energy as currently defined, would include wood-burning biomass. Burning trees is worse for the climate than burning fossil fuels. Standing timber is nature's tool to mitigate further climate change. **Burning wood would be a "double whammy " on the climate** because it eliminates sequestration of atmospheric carbon dioxide by the trees and emits carbon into the atmosphere when burned. Even if trees are replanted, that will not replace the lost sequestration for decades, if ever.

I oppose the inclusion of possible tax credits for firm energy produced by burning wood biomass. Pursuing expanding the renewable energy technologies income tax credit to firm renewable energy systems and thereby incentivizing burning wood products as an energy source will worsen the climate and negatively impact our economy. This bill as written would undermine our progress towards 100% truly clean, renewable energy and take us in the wrong direction.

We can't afford to keep pumping more CO2 into the atmosphere. According to the latest United Nations' Intergovernmental Panel on Climate Change (IPCC) report, any further delay in reducing our emissions will miss a brief and rapidly closing window of opportunity to secure a liveable and sustainable future for all. Unless trees and other wood products are excluded from the definition of renewable energy, I urge you to **oppose** this ill-advised bill.

R A Culbertson

Member, 'Hawaii Forest Stewards'

Honokaa

SB-2511-HD-1

Submitted on: 4/5/2022 10:18:57 AM

Testimony for FIN on 4/6/2022 1:30:00 PM

Submitted By	Organization	Testifier Position	Testify
Ted Bohlen	Climate Protectors Hawai'i	Comments	Written Testimony Only

Comments:

To: The Honorable Sylvia Luke, Chair, The Honorable Kyle Yamashita, Vice Chair, and Members of the House Committee on Finance

From: Climate Protectors Hawai'i (by Ted Bohlen)

Re: Hearing **SB2511 SD2 HD1 RELATING TO TAXATION.**

Hearing: Wednesday, April 6, 2022, 1:30 p.m., CR 308 and by videoconference

Aloha Chair Luke, Vice Chair Yamashita, and Members of the House Committee on Finance:

The Climate Protectors Hawai'i is a group focused on reversing the climate crisis and encouraging Hawai'i to lead the world towards a safe and sustainable climate and future. The Climate Protectors Hawai'i **COMMENTS ON SB2511 SD2 HD1.**

The Climate Protectors Hawai'i is a group focused on reversing the climate crisis and encouraging Hawai'i to lead the world towards a safe and sustainable climate and future. The Climate Protectors Hawai'i **SUPPORTS the bill's intent to provide tax credits for renewable energy**, but respectfully **COMMENTS IN OPPOSITION** to the inclusion of **possible tax credits for firm energy produced by burning wood biomass.**

The bill uses the definition of "renewable energy" from HRS Sec. 269-91, which includes energy produced from "biomass, including biomass crops." **This provision of the bill should be amended to clarify that it excludes wood biomass for tax credit purposes. On page 6, lines 15-16, it should be: "'Renewable energy' shall have the same meaning as in section 269-91, except that 'biomass and biomass crops' shall exclude trees or wood."**

We are in a climate emergency; we should not incentivize energy sources that harm the climate! Not all renewables are good for the environment. Burning trees is worse for the climate than burning fossil fuels! Standing timber is nature's tool to mitigate further climate change. Burning wood would be a "double whammy " on the climate because eliminates sequestration of atmospheric carbon dioxide by the trees and emits carbon into the atmosphere when burned.

Even if trees are replanted, that will not replace the lost sequestration for decades, if ever.

Incentivizing wood burning with tax credits to generate electricity would run directly counter to the State's mandate to become carbon negative as soon as practicable.

Please amend this bill to exclude proposed tax credits for firm renewable energy produced from wood.

Mahalo!

Climate Protectors Hawai'i (by Ted Bohlen)



To: The House Committee on Finance
From: Sherry Pollack, 350Hawaii.org
Date: Wednesday, April 6, 2022, 1:30pm

In strong opposition to SB2511 SD2 HD1

Aloha Chair Luke, Vice Chair Yamashita, and members of the Finance committee,

I am Co-Founder of the Hawaii chapter of 350.org, the largest international organization dedicated to fighting climate change. 350Hawaii.org **strongly opposes SB2511 SD2 HD1** that would expand the renewable energy technologies income tax credit to include firm renewable energy systems.

350Hawaii supports and encourages the efforts of the legislature to incentivize our transition to **truly clean, non-climate harming renewable energy**. However, “firm” renewable energy as currently defined would include burning trees and other wood products. Incentivizing firm renewable energy systems that include burning trees and wood products would result in devastating consequences to our environment and climate.

Burning trees is more expensive than utility-scale wind and solar. Furthermore, burning wood for energy is disastrous for the climate. It destroys forests, and puts out more carbon dioxide into the air than coal. The period for regrowth and making up that carbon debt can take many decades or more, time that we no longer have the luxury of wasting. We are in a climate crisis and must make scientifically sound choices that will reduce greenhouse gas emissions as soon as possible if we are to stay below 1.5 degrees Celsius rise. Now is not the time to promote technologies that increase greenhouse gases simply because they are not derived from fossil fuels.

In short, pursuing expanding the renewable energy technologies income tax credit to firm renewable energy systems and thereby incentivizing burning wood products as an energy source will worsen the climate and negatively impact our economy. SB2511 SD2 HD1 as written would undermine our progress towards 100% truly clean, renewable energy and take us in the wrong direction.

We can't afford to keep pumping more CO2 into the atmosphere. **According to the latest United Nations' Intergovernmental Panel on Climate Change (IPCC) report, any further delay in reducing our emissions will miss a brief and rapidly closing window of opportunity to secure a livable and sustainable future for all.** Unless trees and other wood products are excluded from the definition of renewable energy, we urge you to **oppose** this ill-advised bill.

Mahalo for the opportunity to testify.

Sherry Pollack
Co-Founder, 350Hawaii.org

OPPOSE SB2511 SD2 HD1





**Testimony to
The Committee on Finance
Wednesday, April 6, 2022
1:30 PM
Conference Room 308 & Via Video Conference, Hawaii State Capitol
SB 2511 SD2, HD1**

Chair Luke, Vice Chair Yamashita, and members of the committee,

Hawaii Clean Power Alliance (HCPA) supports the intent of SB 2511 SD2 HD1, which expands the renewable energy technologies income tax credit to include firm renewable energy systems, with suggested amendments.

Hawaii Clean Power Alliance is a nonprofit alliance organized to advance and sustain the development of clean energy in Hawaii. Our goal is to support the state's policy goal of 100 percent renewable energy by 2045. We advocate for utility-scale renewable energy, which is critical to meeting the state's clean energy and carbon reduction goals.

Tax credits have proven essential in building momentum and scale in the development and distribution of diverse renewable sources of energy, as demonstrated in the early days of solar and wind development. Similarly, the development of firm renewable energy systems such as hydroelectric, hydrogen and geothermal requires a significant outlay of investment and resources, bringing high-paying jobs and other benefits to the local communities. Hawaii needs to develop more renewable generation based on local resources to mitigate the risk of fossil fuel imports. The establishment of these tax credits provides incentive to create firm renewable based energy systems that can replace all of the fossil fuel generation on the electric grid while bringing greater stability and reliability.

New Year's Eve demonstrated in real time what happens when the grid is not receiving enough energy to sustain the demand. A confluence of rain, no wind, and multiple generation units going down left the grid without sufficient power, causing the electric utility to issue a notice of power conservation. We were fortunate that this event occurred during a low-demand period, thus there were little consequences. A similar situation during high demand times would likely be much more dire, similar to the recent tragic events both Texas and California experienced with multiple outages.

These credits, giving consideration to firm renewable power energy systems, create the runway for new firm renewable power plants with 24/7 availability, which will dramatically improve our energy diversity and ultimately, reliability.

Requested amendments for consideration:

As currently written, allowing the definition of firm energy to be "consistent with the PPA agreement", would likely result in unintended consequences that allow additional tax credits be provided without incenting creation of additional truly "always available energy." For example, if a solar facility must have a four-hour battery as defined in the PPA, that facility could qualify for the credit, even though it is not producing any energy or actually providing energy at all times. Both intermittent and firm renewables are important to the grid, however, if this bill is intended to incentivize firm renewables, then the definition for firm renewable energy system should be revised.

Thus, we recommend that the language be changed as follows:

"Firm renewable energy system" means a renewable energy technology system that is always available to produce energy at its designed capacity on the demand of the energy system's operator, ~~consistent with the terms of an approved power purchase agreement.~~

We ask the committee to pass this bill with this amendment.

Thank you for the opportunity to testify.



April 6, 2022

**TESTIMONY IN SUPORT OF SENATE BILL 2511 SD 2 HD 1
RELATING TO TAXATION**

House Committee on Finance
The Honorable Sylvia Luke, Chair
The Honorable Kyle T. Yamashita, Vice Chair

Wednesday, April 6, 2022, 1:30 p.m.

VIA VIDEOCONFERENCE
Conference Room 308
State Capitol
415 South Beretania Street

Chair Luke, Vice Chair Yamashita, and members of the Committee,

Thank you for the opportunity to submit testimony to express our support for SB 2511 SD 2 HD 1, Relating to Taxation. My name is Eric Wright, President at Par Hawaii and am responsible for energy security for our state and leading our company's transition to the production of renewable energy to support Hawai'i's clean energy goals.

As our state and company transition to renewable energy, we believe tax credits for renewable energy technologies will be critical to supporting our state's clean energy goals.

We are intensely aware of Hawaii's vulnerability to global forces. The recent invasion of Ukraine and our subsequent decision to suspend crude oil purchases from Russia underscored our state's need for more energy self-sufficiency.

Currently, more than 80% of Hawaii's energy is dependent upon fossil fuels. We are responsible for importing crude oil and producing refined fuels that Hawaii residents and businesses need. However, we also recognize it is our responsibility to help with decarbonizing and reducing greenhouse gases in our state.

Par Hawaii is working with partners now to use our distribution assets to distribute biofuels and exploring ways to sequester carbon. Some of these projects are being funded in part by federal sources such as the U.S. Department of Agriculture grants and other projects will be financed with private capital in partnership with others. Incentives for renewable energy production and related technologies would help to round out the support necessary for us to use proven ways we can use our refining assets for large-scale, permanent renewable energy production.

Mahalo for allowing Par Hawaii to share our perspectives on SD 2511 SD 2 HD 1.

SB-2511-HD-1

Submitted on: 4/4/2022 12:28:22 PM

Testimony for FIN on 4/6/2022 1:30:00 PM

Submitted By	Organization	Testifier Position	Testify
JON WHITE	Individual	Support	Written Testimony Only

Comments:

I support this bill with the SD2 wording

SB-2511-HD-1

Submitted on: 4/4/2022 3:45:03 PM

Testimony for FIN on 4/6/2022 1:30:00 PM

Submitted By	Organization	Testifier Position	Testify
chad Failma	Individual	Support	Written Testimony Only

Comments:

I am in support of the SD2 version of this bill

SB-2511-HD-1

Submitted on: 4/4/2022 3:46:10 PM

Testimony for FIN on 4/6/2022 1:30:00 PM

Submitted By	Organization	Testifier Position	Testify
Kekoa Bruhn	Individual	Support	Written Testimony Only

Comments:

I am in support of the SD2 version of this bill

SB-2511-HD-1

Submitted on: 4/4/2022 3:47:19 PM

Testimony for FIN on 4/6/2022 1:30:00 PM

Submitted By	Organization	Testifier Position	Testify
kodey saizon	Individual	Support	Written Testimony Only

Comments:

I am in support of the SD2 version of this bill

SB-2511-HD-1

Submitted on: 4/4/2022 3:51:24 PM

Testimony for FIN on 4/6/2022 1:30:00 PM

Submitted By	Organization	Testifier Position	Testify
Christopher Finau	Individual	Support	Written Testimony Only

Comments:

I am in support

SB-2511-HD-1

Submitted on: 4/4/2022 3:51:32 PM

Testimony for FIN on 4/6/2022 1:30:00 PM

Submitted By	Organization	Testifier Position	Testify
Burton Chun	Individual	Support	Written Testimony Only

Comments:

I support SB2511

SB-2511-HD-1

Submitted on: 4/4/2022 3:52:15 PM

Testimony for FIN on 4/6/2022 1:30:00 PM

Submitted By	Organization	Testifier Position	Testify
William Campbell	Individual	Support	Written Testimony Only

Comments:

I support this bill Mahalo

SB-2511-HD-1

Submitted on: 4/4/2022 3:55:58 PM

Testimony for FIN on 4/6/2022 1:30:00 PM

Submitted By	Organization	Testifier Position	Testify
Dave Teriirere	Individual	Support	Written Testimony Only

Comments:

I am in support of the SD2 version of this bill

SB-2511-HD-1

Submitted on: 4/4/2022 3:56:12 PM

Testimony for FIN on 4/6/2022 1:30:00 PM

Submitted By	Organization	Testifier Position	Testify
noah kassebeer	Individual	Support	Written Testimony Only

Comments:

I am in support of the SD2 version of this bill

SB-2511-HD-1

Submitted on: 4/4/2022 3:58:57 PM

Testimony for FIN on 4/6/2022 1:30:00 PM

Submitted By	Organization	Testifier Position	Testify
Alana Kaili	Individual	Support	Written Testimony Only

Comments:

I am in support of the SD2 version of this bill.

SB-2511-HD-1

Submitted on: 4/4/2022 3:59:57 PM

Testimony for FIN on 4/6/2022 1:30:00 PM

Submitted By	Organization	Testifier Position	Testify
Ted Scott	Individual	Support	Written Testimony Only

Comments:

I SUPPORT THE SD2 VERSION OF THIS BILL

SB-2511-HD-1

Submitted on: 4/4/2022 4:00:08 PM

Testimony for FIN on 4/6/2022 1:30:00 PM

Submitted By	Organization	Testifier Position	Testify
Keoni Mendiola	Individual	Support	Written Testimony Only

Comments:

I am in support of the SD2 version of the bill.

SB-2511-HD-1

Submitted on: 4/4/2022 4:00:41 PM

Testimony for FIN on 4/6/2022 1:30:00 PM

Submitted By	Organization	Testifier Position	Testify
Hubert Pruett	Individual	Support	Written Testimony Only

Comments:

I am in support of the SD2 version of this bill.

SB-2511-HD-1

Submitted on: 4/4/2022 4:02:48 PM

Testimony for FIN on 4/6/2022 1:30:00 PM

Submitted By	Organization	Testifier Position	Testify
Jason Yoshimura	Individual	Support	Written Testimony Only

Comments:

I am in support of the SD2 version of this bill 🍷🍷🍷

SB-2511-HD-1

Submitted on: 4/4/2022 4:03:48 PM

Testimony for FIN on 4/6/2022 1:30:00 PM

Submitted By	Organization	Testifier Position	Testify
Tyler Yuu	Individual	Support	Written Testimony Only

Comments:

I am in supprt of the SD 2 version of this bill

SB-2511-HD-1

Submitted on: 4/4/2022 4:14:51 PM

Testimony for FIN on 4/6/2022 1:30:00 PM

Submitted By	Organization	Testifier Position	Testify
Manny Kulukulualani	Individual	Support	Written Testimony Only

Comments:

I am in support of the SD2 version of this bill.

SB-2511-HD-1

Submitted on: 4/4/2022 4:26:25 PM

Testimony for FIN on 4/6/2022 1:30:00 PM

Submitted By	Organization	Testifier Position	Testify
Levi Archuleta	Individual	Support	Written Testimony Only

Comments:

I am in support of the SD2 of this bill.

SB-2511-HD-1

Submitted on: 4/4/2022 4:27:32 PM

Testimony for FIN on 4/6/2022 1:30:00 PM

Submitted By	Organization	Testifier Position	Testify
Chauncey Dunhour	Individual	Support	Written Testimony Only

Comments:

I am in support of the SD2 version of this bill. Mahalo.

SB-2511-HD-1

Submitted on: 4/4/2022 4:27:41 PM

Testimony for FIN on 4/6/2022 1:30:00 PM

Submitted By	Organization	Testifier Position	Testify
Keenan Luke	Individual	Support	Written Testimony Only

Comments:

I am in support of the SD2 version of this bill.

SB-2511-HD-1

Submitted on: 4/4/2022 4:27:53 PM

Testimony for FIN on 4/6/2022 1:30:00 PM

Submitted By	Organization	Testifier Position	Testify
Clinton Blackman	Individual	Support	Written Testimony Only

Comments:

I am in support of the SD2 version of this bill

SB-2511-HD-1

Submitted on: 4/4/2022 4:31:36 PM

Testimony for FIN on 4/6/2022 1:30:00 PM

Submitted By	Organization	Testifier Position	Testify
Trey Ah Yuen	Individual	Support	Written Testimony Only

Comments:

I am in support of the SD2 version of this bill.

SB-2511-HD-1

Submitted on: 4/4/2022 4:34:42 PM

Testimony for FIN on 4/6/2022 1:30:00 PM

Submitted By	Organization	Testifier Position	Testify
Walter Walker	Individual	Support	Written Testimony Only

Comments:

I strongly support

SB-2511-HD-1

Submitted on: 4/4/2022 4:37:40 PM

Testimony for FIN on 4/6/2022 1:30:00 PM

Submitted By	Organization	Testifier Position	Testify
Chaz Bajet	Individual	Support	Written Testimony Only

Comments:

I am in support of the SD2 version of this bill.

SB-2511-HD-1

Submitted on: 4/4/2022 4:38:50 PM

Testimony for FIN on 4/6/2022 1:30:00 PM

Submitted By	Organization	Testifier Position	Testify
Jonovan Tuinei	Individual	Support	Written Testimony Only

Comments:

I am in support of the SD2 version of this bill.

SB-2511-HD-1

Submitted on: 4/4/2022 5:16:15 PM

Testimony for FIN on 4/6/2022 1:30:00 PM

Submitted By	Organization	Testifier Position	Testify
Noah Campbell	Individual	Support	Written Testimony Only

Comments:

I'am in support of the SD2 version of this Bill

SB-2511-HD-1

Submitted on: 4/4/2022 5:34:11 PM

Testimony for FIN on 4/6/2022 1:30:00 PM

Submitted By	Organization	Testifier Position	Testify
Adrian Kaleo Nakashima	Individual	Support	Written Testimony Only

Comments:

I am in support of the SD2 version of this bill.

SB-2511-HD-1

Submitted on: 4/4/2022 5:44:45 PM

Testimony for FIN on 4/6/2022 1:30:00 PM

Submitted By	Organization	Testifier Position	Testify
Jacob Ramos	Individual	Support	Written Testimony Only

Comments:

I am in support of the SD2 version of this Bill.

SB-2511-HD-1

Submitted on: 4/4/2022 5:56:30 PM

Testimony for FIN on 4/6/2022 1:30:00 PM

Submitted By	Organization	Testifier Position	Testify
Wade Terlep	Individual	Support	Written Testimony Only

Comments:

I am in support of the SD2 version of this bill

SB-2511-HD-1

Submitted on: 4/4/2022 6:05:54 PM

Testimony for FIN on 4/6/2022 1:30:00 PM

Submitted By	Organization	Testifier Position	Testify
Brennon Pias	Individual	Support	Written Testimony Only

Comments:

I am in support of the SD2 version of this bill.

SB-2511-HD-1

Submitted on: 4/4/2022 6:59:56 PM

Testimony for FIN on 4/6/2022 1:30:00 PM

Submitted By	Organization	Testifier Position	Testify
Hopena Pokipala	Individual	Support	Written Testimony Only

Comments:

I am in support of the SD2 version of this bill.

SB-2511-HD-1

Submitted on: 4/4/2022 7:12:31 PM

Testimony for FIN on 4/6/2022 1:30:00 PM

Submitted By	Organization	Testifier Position	Testify
Conan K Donahue	Individual	Support	Written Testimony Only

Comments:

I am in support of SB2511

SB-2511-HD-1

Submitted on: 4/4/2022 8:17:16 PM

Testimony for FIN on 4/6/2022 1:30:00 PM

Submitted By	Organization	Testifier Position	Testify
Zorich Palimoo	Individual	Support	Written Testimony Only

Comments:

I am in support of the SD2 version of this bill

SB-2511-HD-1

Submitted on: 4/4/2022 8:59:51 PM

Testimony for FIN on 4/6/2022 1:30:00 PM

Submitted By	Organization	Testifier Position	Testify
Robert Enriquez	Individual	Support	Written Testimony Only

Comments:

I am in support of the SD2 version of this bill.

SB-2511-HD-1

Submitted on: 4/4/2022 9:31:12 PM

Testimony for FIN on 4/6/2022 1:30:00 PM

Submitted By	Organization	Testifier Position	Testify
Edward J Klaneski	Individual	Support	Written Testimony Only

Comments:

I am in strong support of the SD2 version of this bill.

SB-2511-HD-1

Submitted on: 4/4/2022 11:04:32 PM

Testimony for FIN on 4/6/2022 1:30:00 PM

Submitted By	Organization	Testifier Position	Testify
Alice Kim	Individual	Support	Written Testimony Only

Comments:

If the State gives tax credits for solar energy, an intermittent renewable energy source, the State should do the same for firm renewable energy sources including geothermal. Furthermore, the \$750,000 cap on the total amount of tax credits should be removed.

Offering a tax credit can offset the financial risks of geothermal development. While producing geothermal power incurs low operating costs, developing a geothermal power plant requires a large capital investment and a competitive Purchase Power Agreement (PPA). To obtain a PPA, a developer has to provide proof of a demonstrated resource and an interconnection study/agreement. While demonstrating the resource for solar or wind is inexpensive, the same for geothermal is very expensive and requires multiple surveys (e.g., geophysical surveys, thermal gradient holes, full-size diameter drilling well). Each of these activities costs \$1 million or more, resulting in a \$5-to-10 million cost to demonstrate a geothermal resource. In Hawaii, drilling a well to confirm a geothermal resource alone costs over a million dollars. Purchasers often require geothermal developers to demonstrate the size of the potential resource with a reservoir model and obtain third-party verification. Therefore, geothermal developers have to invest significantly more money into a project than solar or wind project developers do before knowing whether a PPA can be obtained. Therefore, geothermal developers need to be able to obtain a competitively priced PPA with appropriate terms and conditions to avoid losses and proceed in a timely manner.

Geothermal can provide baseload power and increase energy security. Baseload power is the minimum amount of power that a utility company must generate for its customers and ensures reliability of the electricity grid. Unlike solar and wind energy, geothermal energy does not depend on favorable weather conditions and produces electricity continuously--24 hours a day, 7 days a week. Because geothermal energy is stable and predictable, it enables accurate energy planning.

Geothermal offers a high capacity factor. The capacity factor is the ratio of actual energy output to possible energy output and indicates how fully and reliably a unit's capacity is used. Out of all renewable energy sources, geothermal provides the highest capacity factor. Modern geothermal power plants deliver a capacity factor upwards of ninety-to-ninety-five percent.

The solar and wind energy industries became mainstream because they benefited from supportive government policies. The State of Hawaii can provide the same support to

geothermal. Geothermal can become more competitive in cost, produce more clean energy locally, and provide local quality jobs.

Please support SB 2511 to make geothermal a viable local industry, ensure reliability of the State's electricity grid, and make the State's goal of reaching 100 percent renewable energy by 2045 more affordable.

SB-2511-HD-1

Submitted on: 4/4/2022 11:54:47 PM

Testimony for FIN on 4/6/2022 1:30:00 PM

Submitted By	Organization	Testifier Position	Testify
Gabriel	Individual	Support	Written Testimony Only

Comments:

I am in support of the SD2 version of this bill.

SB-2511-HD-1

Submitted on: 4/5/2022 4:18:34 AM

Testimony for FIN on 4/6/2022 1:30:00 PM

Submitted By	Organization	Testifier Position	Testify
Patricia Ann Kemper	Individual	Oppose	Written Testimony Only

Comments:

Aloha,

We must preserve our rainforests, not contribute to their destruction. Granting tax credits to corporations that support these actions in their business plans or corporate policy does NOT encourage proper stewardship of our beloved state or Earth.

Please do not pass this bill.

Malama aina,

Ann Kemper

SB-2511-HD-1

Submitted on: 4/5/2022 5:32:49 AM

Testimony for FIN on 4/6/2022 1:30:00 PM

Submitted By	Organization	Testifier Position	Testify
Dane Kaluhiwa	Individual	Support	Written Testimony Only

Comments:

I am in support of the SD2 version of this bill

SB-2511-HD-1

Submitted on: 4/5/2022 6:43:34 AM

Testimony for FIN on 4/6/2022 1:30:00 PM

Submitted By	Organization	Testifier Position	Testify
Noel Morin	Individual	Comments	Written Testimony Only

Comments:

Dear Chair Luke, Vice-Chair Yamashita, and members of the Finance Committee,

I support SB2511 SD2 HD1 but ask that we explicitly exclude tax credits for energy solutions that involve burning trees or wood products from trees.

While biomass energy providers can claim that new trees can sequester carbon, this sequestration happens only after a decade or two of growth. We cannot afford to pump even more CO2 into the atmosphere this decade. One need only reflect on this week's [IPCC report](#) to realize the need to dramatically cut emissions. We also need to do more to sequester legacy emissions.

Instead of burning trees, we need to keep them alive so that they continue to capture carbon. As needed, we can convert them to wood products that allow the carbon to continue to be stored and not released into the atmosphere.

There are other biomass solutions that may be acceptable. These involve annuals or fast-growing plants like hemp and bamboo. These have short growth cycles, so the carbon cycle MAY be OK. (There are still challenges with the carbon footprint associated with growing, harvesting, transporting, and burning the material.)

Importantly, we have yet-realized geothermal and hydro resources that offer non-combustion-related energy solutions at rates that will benefit our residents. For instance, the latest Puna Geothermal Venture docket (conditionally approved) lists firm geothermal-based energy at less than 6 cents/kWh (blended). This measure can incentivize the research and development of these firm renewable energy solutions.

Thank you for this opportunity.

Noel Morin

Climate Action Advocate - Hilo

SB-2511-HD-1

Submitted on: 4/5/2022 6:46:49 AM

Testimony for FIN on 4/6/2022 1:30:00 PM

Submitted By	Organization	Testifier Position	Testify
anthony padilla	Individual	Support	Written Testimony Only

Comments:

In support of the sd version of this bill

SB-2511-HD-1

Submitted on: 4/5/2022 6:55:55 AM

Testimony for FIN on 4/6/2022 1:30:00 PM

Submitted By	Organization	Testifier Position	Testify
Cisco Valeho	Individual	Support	Written Testimony Only

Comments:

I am in support of SD 2 version of this bill

SB-2511-HD-1

Submitted on: 4/5/2022 8:11:18 AM

Testimony for FIN on 4/6/2022 1:30:00 PM

Submitted By	Organization	Testifier Position	Testify
Cheryl Reeser	Individual	Oppose	Written Testimony Only

Comments:

Aloha Honorable Members of the Finance Committee,

I am writing to strongly oppose SB2511 SD2 HD1. Burning trees for fuel should not be incentivized. Burning wood biomass for energy is not the answer and will have harmful long term impacts on our environment. Let's make good choices about energy resources now as the wrong choices cannot be reversed.

Mahalo,

Cheryl Reeser
Makawao, Maui

SB-2511-HD-1

Submitted on: 4/5/2022 8:15:03 AM

Testimony for FIN on 4/6/2022 1:30:00 PM

Submitted By	Organization	Testifier Position	Testify
Lawrence DeCosta III	Individual	Support	Written Testimony Only

Comments:

I am support of the SD2 Version of this Bill.

SB-2511-HD-1

Submitted on: 4/5/2022 9:07:04 AM

Testimony for FIN on 4/6/2022 1:30:00 PM

Submitted By	Organization	Testifier Position	Testify
richard gideon	Individual	Support	Written Testimony Only

Comments:

I am in support of the sd2 version of this bill

SB-2511-HD-1

Submitted on: 4/5/2022 9:14:45 AM

Testimony for FIN on 4/6/2022 1:30:00 PM

Submitted By	Organization	Testifier Position	Testify
ANDREW ISODA	Individual	Oppose	Written Testimony Only

Comments:

-- I oppose the inclusion of possible tax credits for firm energy produced by burning wood biomass. Pursuing expanding the renewable energy technologies income tax credit to firm renewable energy systems and thereby incentivizing burning wood products as an energy source will worsen the climate and negatively impact our economy. This bill as written would undermine our progress towards 100% truly clean, renewable energy and take us in the wrong direction.

-- We can't afford to keep pumping more CO2 into the atmosphere. According to the latest United Nations' Intergovernmental Panel on Climate Change (IPCC) report, any further delay in reducing our emissions will miss a brief and rapidly closing window of opportunity to secure a liveable and sustainable future for all. Unless trees and other wood products are excluded from the definition of renewable energy, I urge you to **oppose** this ill-advised bill.

SB-2511-HD-1

Submitted on: 4/5/2022 9:21:30 AM

Testimony for FIN on 4/6/2022 1:30:00 PM

Submitted By	Organization	Testifier Position	Testify
Gwendelwyn Cruise	Individual	Oppose	Written Testimony Only

Comments:

I strongly oppose this bill. It is a clandestine strategy to burn trees for energy, which would be disastrous for our planet. We literally don't have a moment to waste on bad bills. Please don't pass this bill.

SB-2511-HD-1

Submitted on: 4/5/2022 9:27:42 AM

Testimony for FIN on 4/6/2022 1:30:00 PM

Submitted By	Organization	Testifier Position	Testify
Debra Gavelek	Individual	Support	Written Testimony Only

Comments:

I support the original intent of this bill. Please revert back to the original bill's language.

Thank you

SB-2511-HD-1

Submitted on: 4/5/2022 9:31:08 AM

Testimony for FIN on 4/6/2022 1:30:00 PM

Submitted By	Organization	Testifier Position	Testify
Kahekili Fuchs	Individual	Support	Written Testimony Only

Comments:

I am in support of the SD2 version of this bill.

SB-2511-HD-1

Submitted on: 4/5/2022 9:32:47 AM

Testimony for FIN on 4/6/2022 1:30:00 PM

Submitted By	Organization	Testifier Position	Testify
Glenn Metzler	Individual	Oppose	Written Testimony Only

Comments:

Oppose

SB-2511-HD-1

Submitted on: 4/5/2022 9:36:01 AM

Testimony for FIN on 4/6/2022 1:30:00 PM

Submitted By	Organization	Testifier Position	Testify
John Rabanal	Individual	Support	Written Testimony Only

Comments:

I am in support of the SD2 version of this bill

SB-2511-HD-1

Submitted on: 4/5/2022 9:49:11 AM

Testimony for FIN on 4/6/2022 1:30:00 PM

Submitted By	Organization	Testifier Position	Testify
Ross Wilson Jr.	Individual	Support	Written Testimony Only

Comments:

I support the bill's original intent. Please pass the bill to allow the bill's details to be worked out during conference.

SB-2511-HD-1

Submitted on: 4/5/2022 10:02:09 AM

Testimony for FIN on 4/6/2022 1:30:00 PM

Submitted By	Organization	Testifier Position	Testify
Kyle Miyahana	Individual	Support	Written Testimony Only

Comments:

I am in support of SB2511 relating to taxation.

SB-2511-HD-1

Submitted on: 4/5/2022 10:06:33 AM

Testimony for FIN on 4/6/2022 1:30:00 PM

Submitted By	Organization	Testifier Position	Testify
Thomas Brandt	Individual	Oppose	Written Testimony Only

Comments:

I strongly oppose this bill.

Burning trees is worse for the climate than burning fossil fuels.

Standing timber is nature's tool to mitigate further climate change.

Burning wood would be a "double whammy " on the climate because it eliminates sequestration of atmospheric carbon dioxide by the trees and emits carbon into the atmosphere when burned.

Even if trees are replanted, that will not replace the lost sequestration for decades, if ever.

Thank you for the opportunity to offer these comments.

SB-2511-HD-1

Submitted on: 4/5/2022 10:18:53 AM

Testimony for FIN on 4/6/2022 1:30:00 PM

Submitted By	Organization	Testifier Position	Testify
Michael Carion	Individual	Support	Written Testimony Only

Comments:

I support the bill's original intent. Please pass the bill to allow the bill's details to be worked out during conference.

SB-2511-HD-1

Submitted on: 4/5/2022 10:22:02 AM

Testimony for FIN on 4/6/2022 1:30:00 PM

Submitted By	Organization	Testifier Position	Testify
Jerome K H Kupukaa	Individual	Support	Written Testimony Only

Comments:

I support bill 2511

SB-2511-HD-1

Submitted on: 4/5/2022 10:53:22 AM

Testimony for FIN on 4/6/2022 1:30:00 PM

Submitted By	Organization	Testifier Position	Testify
Hattie Gerrish	Individual	Support	Written Testimony Only

Comments:

Aloha Representatives,

I support this bill because we must do everything in our power to expand and accelerate the green energy revolution.

Not only is the climate crisis hitting harder every year, Putin's vicious attack on Ukraine has highlighted the importance of energy independence. Too often our country's ability to do the right thing is hampered by our dependence on importing fossil fuels from cruel, anti-democratic dictators. I am sick and tired of our state, which until recently depended on Russian oil, and our nation compromising our most sacred values because we need cheap energy.

Although burning biomass for energy may be the least preferable renewable energy option, I support keeping this option open because it is better than fossil fuel, which unlike biomass is always imported and is harder to put back in the environment. I do not support importing biomass for energy generation. The legislature should encourage the use of only the most clean and efficient bioenergy technologies, as some are better than others.

Mahalo for your consideration.

SB-2511-HD-1

Submitted on: 4/5/2022 11:11:32 AM

Testimony for FIN on 4/6/2022 1:30:00 PM

Submitted By	Organization	Testifier Position	Testify
Diane Ware	Individual	Oppose	Written Testimony Only

Comments:

Dear legislators,

My name is Diane Ware and I strongly oppose this measure to give subsidies to firm renewables. I have health issues related to burning anything. Not only does it affect my lungs but I also get headaches. I live in Volcano where neighbors burn wood in fireplaces and I suffer from these emissions more than I do from the SO2 from Kilauea.

I oppose the inclusion of possible tax credits for firm energy produced by burning wood biomass. Pursuing expanding the renewable energy technologies income tax credit to firm renewable energy systems and thereby incentivizing burning wood products as an energy source will worsen the climate and negatively impact our economy. This bill as written would undermine our progress towards 100% truly clean, renewable energy and take us in the wrong direction.

-- We can't afford to keep pumping more CO2 into the atmosphere. According to the latest United Nations' Intergovernmental Panel on Climate Change (IPCC) report, any further delay in reducing our emissions will miss a brief and rapidly closing window of opportunity to secure a liveable and sustainable future for all. Unless trees and other wood products are excluded from the definition of renewable energy, I urge you to **oppose** this ill-advised bill.

Mahalo for carefully considering the implications of this bill and it's companion SB2510.

-7815 Kapoha Pl, Volcano Hi 96785

SB-2511-HD-1

Submitted on: 4/5/2022 11:19:11 AM

Testimony for FIN on 4/6/2022 1:30:00 PM

Submitted By	Organization	Testifier Position	Testify
joshua demello	Individual	Support	Written Testimony Only

Comments:

I am in support of SD2 version of this bill.

SB-2511-HD-1

Submitted on: 4/5/2022 11:24:38 AM

Testimony for FIN on 4/6/2022 1:30:00 PM

Submitted By	Organization	Testifier Position	Testify
nepo leutu jr	Individual	Support	Written Testimony Only

Comments:

I am in support of the sd2 version of this bill

SB-2511-HD-1

Submitted on: 4/5/2022 11:52:49 AM

Testimony for FIN on 4/6/2022 1:30:00 PM

Submitted By	Organization	Testifier Position	Testify
John Gavelek	Individual	Support	Written Testimony Only

Comments:

I support the original intent of this bill. Please revert back to the original bill's language.

Mahalo!

SB-2511-HD-1

Submitted on: 4/5/2022 12:11:36 PM

Testimony for FIN on 4/6/2022 1:30:00 PM

Submitted By	Organization	Testifier Position	Testify
Jessica Haskin	Individual	Oppose	Written Testimony Only

Comments:

I oppose the inclusion of possible tax credits for firm energy produced by burning wood biomass. Pursuing expanding the renewable energy technologies income tax credit to firm renewable energy systems and thereby incentivizing burning wood products as an energy source will worsen the climate and negatively impact our economy. This bill as written would undermine our progress towards 100% truly clean, renewable energy and take us in the wrong direction.

We can't afford to keep pumping more CO2 into the atmosphere. According to the latest United Nations' Intergovernmental Panel on Climate Change (IPCC) report, any further delay in reducing our emissions will miss a brief and rapidly closing window of opportunity to secure a liveable and sustainable future for all. Unless trees and other wood products are excluded from the definition of renewable energy, I urge you to **oppose** this ill-advised bill.

Thank you very much, Jessica Haskin, Kilauea

SB-2511-HD-1

Submitted on: 4/5/2022 12:11:59 PM

Testimony for FIN on 4/6/2022 1:30:00 PM

Submitted By	Organization	Testifier Position	Testify
Sy Delizo	Individual	Support	Written Testimony Only

Comments:

I support this bill in sd2 version

SB-2511-HD-1

Submitted on: 4/5/2022 12:37:01 PM

Testimony for FIN on 4/6/2022 1:30:00 PM

Submitted By	Organization	Testifier Position	Testify
Jessie Chambers	Individual	Support	Written Testimony Only

Comments:

I SUPPORT THE BILL'S ORIGINAL INTENT

SB-2511-HD-1

Submitted on: 4/5/2022 12:39:47 PM

Testimony for FIN on 4/6/2022 1:30:00 PM

Submitted By	Organization	Testifier Position	Testify
Kekoa Masutani	Individual	Support	Written Testimony Only

Comments:

I am in support of the SD2 version of this bill.

SB-2511-HD-1

Submitted on: 4/5/2022 12:44:40 PM

Testimony for FIN on 4/6/2022 1:30:00 PM

Submitted By	Organization	Testifier Position	Testify
Gavin Concepcion	Individual	Support	Written Testimony Only

Comments:

I am in support of the SD2 version of this bill

SB-2511-HD-1

Submitted on: 4/5/2022 12:48:52 PM

Testimony for FIN on 4/6/2022 1:30:00 PM

Submitted By	Organization	Testifier Position	Testify
Jay Amina III	Individual	Support	Written Testimony Only

Comments:

I am in support of SD2 version of this bill.

SB-2511-HD-1

Submitted on: 4/5/2022 1:12:20 PM

Testimony for FIN on 4/6/2022 1:30:00 PM

Submitted By	Organization	Testifier Position	Testify
Phaethon Keeney	Individual	Oppose	Written Testimony Only

Comments:

The bill, SB2511 is encouragement for a special interest group in 'firm' renewables (including Biomass & Incineration, an interwoven industry) and redundant to already existing State Law encouraging renewable energy generation of all types. I urge you to please OPPOSE SB2511 and it's promotion of 'firm' renewable energy generation.

We do not need tax encouragement for industries the people of Hawaii do not want. I say this as SB2511 has as its primary focus a tax benefit for 'firm' renewable generation, which means 'always on or available sourcing of power generation' including geothermal, hydroelectric, biomass (wood burning) and trash incineration. Wind and solar are variable (due to weather and diurnal cycling) and thus would not apply, however recent advances in battery storage have made this distinction moot, while this definition of 'firm' in the bill would exclude those cheaper, cleaner, fairer opportunities for the community. With the exception of Hydroelectric, which faces some technical and cost hurdles currently, many communities have fought these less desirable forms of 'firm' renewable energy generation in their neighborhoods in favor of Wind and Solar plus storage, and SB2511 promotion of these industries should be opposed. We want to move away from the 'burning economy' and cool our planet.

On all islands, the people of Hawaii do not want to burn trees for power, we want to PLANT TREES to safeguard what we can of a perilous future in the middle of changing Pacific weather patterns and geo-political forces. Ask any young child of Hawaii if they think it's a good idea to chop and burn trees for power. Ask the traditional Hawaiian Cultural Practitioner who supports spiritual/scientific connection to 'Āina, protection of Wai cycling thru forested island ecosystems, and wise resource use thru a multigenerational lens. Kane, the sun, the winds it brings and water cycles it drives are considered primary life forces, why not take this cultural clue to how to direct Hawaii's energy policies into the future? Ask anyone who supported Hawaii's leadership in becoming the first State to Declare a Climate emergency. Ask the Lorax.

We have no time nor ethical wherewithal to burn trees for power and hope they regrow in changing climes many decades to centuries from now if we hope to get thru this planetary bottleneck before us right here and now.

Please promote ethical, community based, distributed Wind, Solar, Hydroelectric.

From the IPCC Climate Change 2022 Report released yesterday, April 4 2022, "About 17% of historical cumulative net CO2 emissions since 1850 occurred between 2010 and 2019 [410±30 GtCO2]. By comparison, the current central estimate of the remaining carbon budget from 2020 onwards for limiting warming to 1.5°C with a probability of 50% has been assessed as 500 Gt CO2, and as 1150 Gt CO2 for a probability of 67% for limiting warming to 2°C.

Previous IPCC reports established we will be at 1.5C near 2030 and 2C around 2040. We have less than 10 years to hold to a livable planet, as 2C has been described as a probable 'tipping point' beyond which anthropogenic factors could be dwarfed by cascading feedback loops toward a 'hothouse earth' state.

As for Incineration, much less do we want to be locked into a dependent one way trash economy burning plastic (a fossil fuel) for energy, polluting and sickening our communities and keeping them financially in debt. We do not want our local governments contractually locked into the plastics market (like H-power Oahu) with high overhead as incinerators are one of the most expensive forms of energy generation out there as well as most expensive waste management options.

Please promote real, cheaper, more just renewables such as Wind, Solar, and Hydroelectric, and OPPOSE SB2511.

Thank you

Phaethon Keeney

Honokaa Hawaii

SB-2511-HD-1

Submitted on: 4/5/2022 1:16:58 PM

Testimony for FIN on 4/6/2022 1:30:00 PM

Submitted By	Organization	Testifier Position	Testify
Kelsey Beck	Individual	Support	Written Testimony Only

Comments:

I am in support of the SD2 version of this bill

SB-2511-HD-1

Submitted on: 4/5/2022 1:27:04 PM

Testimony for FIN on 4/6/2022 1:30:00 PM

Submitted By	Organization	Testifier Position	Testify
Alfred Horner	Individual	Support	Written Testimony Only

Comments:

I am in support of the sd2 version of this bill

SB-2511-HD-1

Submitted on: 4/5/2022 2:38:04 PM

Testimony for FIN on 4/6/2022 1:30:00 PM

Submitted By	Organization	Testifier Position	Testify
Joyce Barbarich	Individual	Support	Written Testimony Only

Comments:

I support the bill's original intent. Please pass the bill to allow the bill's details to be worked out during conference

SB-2511-HD-1

Submitted on: 4/5/2022 5:04:59 PM

Testimony for FIN on 4/6/2022 1:30:00 PM

Submitted By	Organization	Testifier Position	Testify
Cecily M Thornton	Individual	Oppose	Written Testimony Only

Comments:

This tax credit promotes burning trees for energy. Burning processes promote pollution and increases the carbon footprint of the State of Hawaii. Other methods of producing energy are far superior including improving a state wide solar grid and anaerobic digestion of green waste. Additionally, the tax credits are counter to Hawaii's reduced emission goals for 2045. While the title of the bill sounds great, the rest is actually very bad for the precious environments of Hawaii.

SB-2511-HD-1

Submitted on: 4/5/2022 7:19:26 PM

Testimony for FIN on 4/6/2022 1:30:00 PM

Submitted By	Organization	Testifier Position	Testify
Elizabeth Hansen	Individual	Oppose	Written Testimony Only

Comments:

Please, please oppose this bill.

SB2511 SD2 HD1 Expands the renewable energy technologies income tax credit to include firm renewable energy systems. **WHILE THIS SOUNDS LIKE A GOOD IDEA, IT IS A CLANDESTINE STRATEGY TO INSTITUTE BURNING TREES FOR ENERGY.** We are in a climate emergency; we should not incentivize energy sources that harm the climate! Not all renewables are good for the environment. Firm renewable energy as currently defined, would include wood-burning biomass. Burning trees is worse for the climate than burning fossil fuels. Standing timber is nature's tool to mitigate further climate change. **Burning wood would be a "double whammy " on the climate** because it eliminates sequestration of atmospheric carbon dioxide by the trees and emits carbon into the atmosphere when burned. Even if trees are replanted, that will not replace the lost sequestration for decades, if ever.

Mahalo

SB-2511-HD-1

Submitted on: 4/5/2022 7:22:12 PM

Testimony for FIN on 4/6/2022 1:30:00 PM

Submitted By	Organization	Testifier Position	Testify
Rodger Hansen	Individual	Oppose	Written Testimony Only

Comments:

Please oppose this bill.

SB2511 SD2 HD1 Expands the renewable energy technologies income tax credit to include firm renewable energy systems. **WHILE THIS SOUNDS LIKE A GOOD IDEA, IT IS A CLANDESTINE STRATEGY TO INSTITUTE BURNING TREES FOR ENERGY.**

WHY IS THIS IMPORTANT? We are in a climate emergency; we should not incentivize energy sources that harm the climate! Not all renewables are good for the environment. Firm renewable energy as currently defined, would include wood-burning biomass. Burning trees is worse for the climate than burning fossil fuels. Standing timber is nature's tool to mitigate further climate change. **Burning wood would be a "double whammy " on the climate** because it eliminates sequestration of atmospheric carbon dioxide by the trees and emits carbon into the atmosphere when burned. Even if trees are replanted, that will not replace the lost sequestration for decades, if ever.

Mahalo

SB-2511-HD-1

Submitted on: 4/5/2022 8:57:11 PM

Testimony for FIN on 4/6/2022 1:30:00 PM

Submitted By	Organization	Testifier Position	Testify
Jeremy Garrett	Individual	Oppose	Written Testimony Only

Comments:

I oppose this measure. Incentivizing the burning of trees does not address global warming with the speed or urgency that is required.

SB-2511-HD-1

Submitted on: 4/6/2022 12:54:08 AM

Testimony for FIN on 4/6/2022 1:30:00 PM

Submitted By	Organization	Testifier Position	Testify
Alfred Horner	Individual	Support	Written Testimony Only

Comments:

I am in support of the SD2 version of this bill.

SB-2511-HD-1

Submitted on: 4/6/2022 10:36:36 AM

Testimony for FIN on 4/6/2022 1:30:00 PM

Submitted By	Organization	Testifier Position	Testify
Louis Mansanas jr	Individual	Support	Written Testimony Only

Comments:

I am in support of the SD2 version of this bill