

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  
HONOLULU, HAWAII 96810-0150

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 CONSUMER PROTECTION & COMMERCE  
ON  
SENATE BILL NO. 2511, S.D. 2, H.D. 1

**March 21, 2022**  
**2:00 p.m.**  
**Room 329 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  
FAX NO: (808) 587-1560

To: The Honorable Aaron Ling Johanson, Chair;  
The Honorable Lisa Kitagawa, Vice Chair;  
and Members of the House Committee on Consumer Protection & Commerce

From: Isaac W. Choy, Director  
Department of Taxation

Date: Monday, March 21, 2022  
Time: 2:00 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.<sup>1</sup> For example, the credit amount for a firm renewable energy system (regardless of size) could be set at ten per cent

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<sup>1</sup> 26 U.S.C. § 48, *please see* "Renewable Energy Tax Credits" at [https://www.energystar.gov/about/federal\\_tax\\_credits/renewable\\_energy\\_tax\\_credits](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:

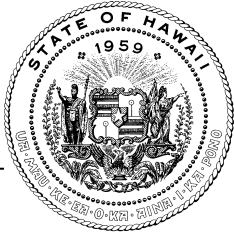
"Firm renewable energy system" means a renewable energy technology system that is:

- (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.



# 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 CONSUMER PROTECTION & COMMERCE

Monday, March 21, 2022  
2:00 PM  
State Capitol, Conference Room 329 & Videoconference

### COMMENTS SB 2511, SD2, HD1 RELATING TO TAXATION.

Chair Johanson, Vice Chair Kitagawa, 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.<sup>1</sup>

<sup>1</sup> "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.

**SB-2511-HD-1**

Submitted on: 3/19/2022 4:47:45 PM

Testimony for CPC on 3/21/2022 2:00:00 PM

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

Comments:

Aloha Senators!

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

While we applaud the efforts to support renewable energy as opposed to classic fossil fuels the term "renewable" still holds a lot of ambiguity. It is a political definition, not a scientific one, roundly regretted by scientists involved with the Kyoto Protocols, as it opens a loophole for burning biomass, which is a death sentence. We're out of time for burning carbonaceous materials and need to be on an expedited course of replacing every such energy source. We're out of time for "renewing" **biomass**, and need to be on an expedited course to plant, compost, and regenerate *additional* biomass into sequestering GHGs, not BURN it!

*To quote the dean of 350.org, Mr. Bill McKibben:*

"the logic (of biomass burning) originally seemed sound: if you cut a tree, another grows in its place, and it will eventually soak up the carbon dioxide emitted from that burning the first tree. But, again, ["eventually" is the problem](#). Burning wood is highly inefficient, and so it releases a huge pulse of carbon *right now*, when the world's climate system is most vulnerable. Trees that grow back in a few generations' time will come too late to save the ice caps."

You must begin to stipulate the importance of "**clean renewable energy**", **recognizing as we see here that 'firm renewable energy' is merely code for permission to burn the standing trees. Please be akamai.**

**No tax breaks for tree burning!**

Our house is on fire now!

Mahalo!

R A Culbertson

Honokaa

Member Hawaii Forest Stewards,



Member Environmental Caucus of the Democratic Party

# 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 Energy & Environmental Protection

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



**Sustainable Energy Hawai'i**

1143 Kukuau St., Hilo, HI 96720

March 20, 2022

**COMMENTS FOR SB2511 SD2 HD2 RELATING TO TAXATION**

Dear Chair Johanson, Vice-Chair Kitagawa, and members of the Consumer Protection and Commerce Committee,

I am Richard Ha, Chair of Sustainable Energy Hawai'i, a coalition of concerned citizens dedicated to improving the quality of life of Hawaii residents through affordable renewable energy.

Sustainable Energy Hawaii is supportive of the intent of SB2511 SD2 HD1 as it will incentivize renewable energy sources. However, we recommend:

- A higher tax credit cap be afforded to geothermal energy system development as geothermal is among the few viable candidates to fulfill our firm renewable energy requirements.
- That we include a complete lifecycle carbon emission assessment threshold equal to or less than 50g CO<sub>2</sub>/kWh using methodology approved or adopted by the National Renewable Energy Laboratory as a part of the definition of "renewable source of energy".
- The exclusion tree-based biomass feedstock for firm energy production.

Aloha, and thank you for this opportunity to testify.

A handwritten signature in black ink that reads "Richard Ha". The signature is written in a cursive, flowing style.

Richard Ha  
Chair  
Sustainable Energy Hawai'i  
[www.sustainableenergyhawaii.org](http://www.sustainableenergyhawaii.org)

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**Sustainable Energy Hawaii** is an all-volunteer, 501(c)3 dedicated to furthering energy self-sufficiency for Hawaii Island. For more information, visit [sustainableenergyhawaii.org](http://sustainableenergyhawaii.org).



**Hawaiian  
Electric**

**TESTIMONY BEFORE THE HOUSE COMMITTEE ON  
CONSUMER PROTECTION & COMMERCE**

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

**Relating to Taxation**

March 21, 2022

2:00 p.m., Agenda Item #19

Conference Room 329 & Videoconference

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

Chair Johanson, Vice Chair Kitagawa 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”) **in support** of S.B. 2511 S.D. 2, H.D.1 Relating to Taxation, and **with recommended amendments** 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. Hawaiian Electric supports the addition of firm renewable energy to this statute and supports the revised definition in H.D.1.

Hawaiian Electric also 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 "renewable energy technology system" being the basis for this tax credit, **Hawaiian Electric suggests the following amendment** to incorporate the existing 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) should 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.



March 21, 2022

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

House Committee on Consumer Protection & Commerce  
The Honorable Aaron Ling Johanson, Chair  
The Honorable Lisa Kitagawa, Vice Chair

Monday, March 21, 2022, 2:00 p.m.

VIA VIDEOCONFERENCE  
Conference Room 329  
State Capitol  
415 South Beretania Street

Chair Johanson, Vice Chair Kitagawa, 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: 3/20/2022 11:37:53 AM

Testimony for CPC on 3/21/2022 2:00:00 PM

Submitted By	Organization	Testifier Position	Testify
Ted Bohlen	Climate Protectors Hawai'i	Comments	Remotely Via Zoom

Comments:

To: The Honorable Aaron Ling Johanson, Chair, The Honorable Lisa Kitagawa, Vice Chair, and Members of the House Committee on Consumer Protection and Commerce

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

Re: Hearing SB2511 SD2 HD1 RELATING TO TAXATION.

Monday March 21, 2022, 2:00 p.m., CR 329 and by videoconference

Aloha Chair Johanson, Vice Chair Kitagawa, and Members of the House Committee on Consumer Protection and Commerce!

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 Consumer Protection and Commerce  
From: Sherry Pollack, 350Hawaii.org  
Date: Monday, March 21, 2022, 2pm

**In strong opposition to SB2511 SD2 HD1**

Aloha Chair Johanson, Vice Chair Kitagawa, and Consumer Protection and Commerce Committee members,

I am Co-Founder of the Hawaii chapter of 350.org, the largest international organization dedicated to fighting climate change. 350Hawaii.org **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 liveable 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



**Testimony to the Committee on Consumer Protection & Commerce**

**Monday, March 21, 2022**

**2:00 PM**

**VIA Video Conference and Conference Room 329, Hawaii State Capitol  
SB 2511 SD2 HD 1**

Chair Johanson, Vice Chair Kitagawa, and members of the committee,

Hawaii Clean Power Alliance (HCPA) **supports** SB 2511 SD2 HD1, which expands the renewable energy technologies income tax credit to include firm renewable energy systems, with these 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:

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 “firm power.” 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 firm energy at all times. 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.

**SB-2511-HD-1**

Submitted on: 3/18/2022 9:09:21 PM

Testimony for CPC on 3/21/2022 2:00:00 PM

<b>Submitted By</b>	<b>Organization</b>	<b>Testifier Position</b>	<b>Testify</b>
Koohan Paik	Individual	Oppose	Written Testimony Only

Comments:

STRONGLY OPPOSE.

**SB-2511-HD-1**

Submitted on: 3/19/2022 6:28:32 PM

Testimony for CPC on 3/21/2022 2:00:00 PM

Submitted By	Organization	Testifier Position	Testify
Cara Oba	Individual	Support	Written Testimony Only

Comments:

To the members of the Consumer Protection & Commerce Committee, regarding Bill SB2511 SD2 HD1 as relating to taxation:

I would like to ask for clarification in defining “firm renewable energy” and would like to suggest that we discourage the use of woody biomass and exclude biomass plants using wood as a source for renewable energy from any tax incentives.

A loophole that has allowed trees to be considered renewable energy in the EU has greatly expanded tree cutting and use as biomass, increasing clear-cutting activities in areas that are not explicitly categorized as conservation or nature reserve lands but are still effectively untouched forest areas. It has expanded the market to influence and encourage increased clear-cutting in the southern hemisphere. There is a similar trajectory in Canada where arboreal forests are being cut. We don't want to encourage reinterpretations of what is low quality wood/trees to support expansion of clear-cutting or support importation of wood pellet products that would only further increase carbon emissions and degrade other environments. Once we develop these types of systems and incentives, there are cascading impacts. Please consider the the failure of the EU and ensure that our own legislation protects our forests and trees as well as those of other communities.

Below are some relevant quotes for your consideration. They are excerpted from a 2021 article published in The Guardian, ['Carbon-neutrality is a fairy tale': how the race for renewables is burning Europe's forests](#):

“Biomass only exists at the scale that it does because of subsidies,” says Duncan Brack, associate fellow at the London-based thinktank Chatham House. “We’re effectively paying to increase carbon emissions in the atmosphere, which is an absurd use of public money.”

Brack says that the 2009 EU renewable energy directive triggered a raft of subsidies for renewable power generation. “But since then solar and wind have really crashed in price. Now is the time to stop subsidising biomass.”

“There’s huge infrastructure employing people and spending money, all based on subsidies,” says Michael Norton of the European Academies’ Science Advisory Council (EASAC). “The original simplistic idea of bioenergy from sustainable forestry suddenly blossomed into an industry achieving the opposite of what it was meant to do.”

...

It takes decades or even centuries for whole trees, unlike corn or other biomass crops, to regrow, says Massimiliano Patierno, an environmental engineer at the International Institute of Law and Environment. “If we count a period of, say, 40 years, in which the new trees have cancelled the carbon debt, then yes, that biomass can be seen as carbon-neutral,” he says. “But if we consider a very short period of time, it is likely that the carbon debt will not be cancelled.”

...

“The urgency has completely changed in the last 15 years,” Michael Norton says. “We don’t have until 2070 – emissions have to come down sooner. Biomass that increases carbon emissions in the next 10 to 30 years is not compatible with climate change policy.”

I strongly urge that we specify that firm renewable energy does not include trees as biomass and are not part of this tax incentive.

Thank you for your time and consideration.



**SB-2511-HD-1**

Submitted on: 3/19/2022 7:13:52 PM

Testimony for CPC on 3/21/2022 2:00:00 PM

<b>Submitted By</b>	<b>Organization</b>	<b>Testifier Position</b>	<b>Testify</b>
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 from SB 2511.

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: 3/19/2022 8:00:05 PM

Testimony for CPC on 3/21/2022 2:00:00 PM

<b>Submitted By</b>	<b>Organization</b>	<b>Testifier Position</b>	<b>Testify</b>
Ryan Christopher	Individual	Oppose	Written Testimony Only

Comments:

Burning trees is not renewable! The people of Hawaii dont want this.

**SB-2511-HD-1**

Submitted on: 3/19/2022 8:12:51 PM

Testimony for CPC on 3/21/2022 2:00:00 PM

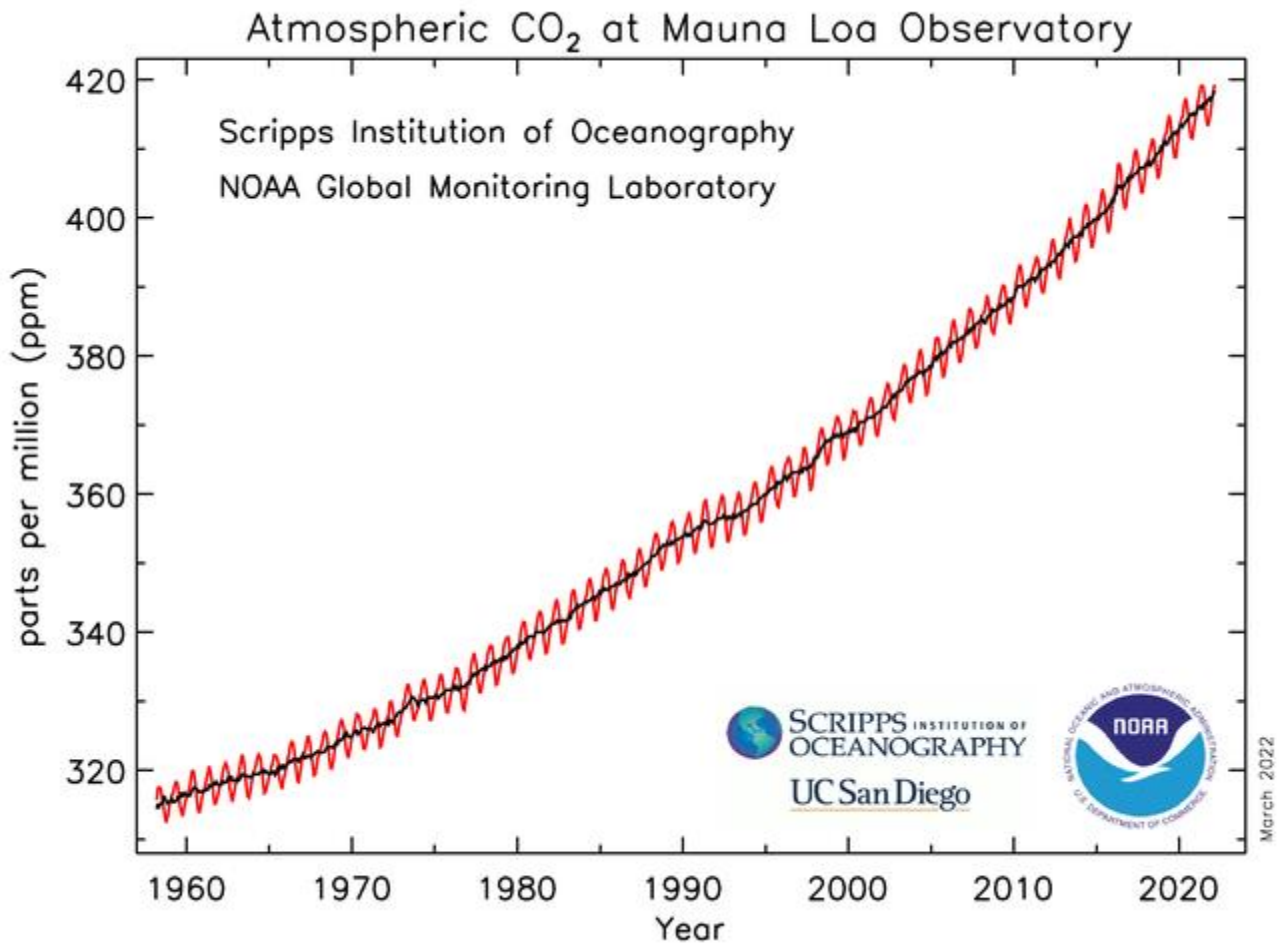
Submitted By	Organization	Testifier Position	Testify
Noel Morin	Individual	Support	Written Testimony Only

Comments:

Dear Chair Johanson, Vice-Chair Kitagawa, and members of the Consumer Protection and Commerce Committee,

I am very appreciative of the intention of SB2511 SD2 HD1. This will accelerate our investment in renewable energy sources, including those required for firm power generation. **I support this measure 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 the [IPCC report](#) or recent [climate abnormalities](#) to realize the need to cut emissions today. We also need to do more to sequester what we've already dumped into the atmosphere.



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.

I must add that other biomass solutions 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: 3/19/2022 8:26:39 PM

Testimony for CPC on 3/21/2022 2:00:00 PM

<b>Submitted By</b>	<b>Organization</b>	<b>Testifier Position</b>	<b>Testify</b>
jeanne wheeler	Individual	Oppose	Written Testimony Only

Comments:

I'm opposed to this bill, please DON'T pass it. Mahalo, JW

**SB-2511-HD-1**

Submitted on: 3/19/2022 10:56:28 PM

Testimony for CPC on 3/21/2022 2:00:00 PM

<b>Submitted By</b>	<b>Organization</b>	<b>Testifier Position</b>	<b>Testify</b>
Elizabeth Hansen	Individual	Comments	Written Testimony Only

Comments:

Aloha Senators:

This bill needs to assure that the term renewable energy technologies does NOT include burning trees. This burning mode is NOT acceptable and is not appropriate for our critical climate change issues. Unless this bill is amended to specify that burning trees and other wood products shall not be considered an acceptable generation source for either firm or intermittent renewable power, it must be OPPOSED.

Mahalo  
Elizabeth Hansen  
registered voter  
Hakalau HI 96710



**SB-2511-HD-1**

Submitted on: 3/19/2022 10:58:36 PM

Testimony for CPC on 3/21/2022 2:00:00 PM

<b>Submitted By</b>	<b>Organization</b>	<b>Testifier Position</b>	<b>Testify</b>
Rodger Hansen	Individual	Comments	Written Testimony Only

Comments:

Aloha Senators:

This bill needs to assure that the term renewable energy technologies does NOT include burning trees. This burning mode is NOT acceptable and is not appropriate for our critical climate change issues. Unless this bill is amended to specify that burning trees and other wood products shall not be considered an acceptable generation source for either firm or intermittent renewable power, it must be OPPOSED.

Mahalo  
Rodger Hansen  
registered voter  
Hakalau HI 96710

**SB-2511-HD-1**

Submitted on: 3/20/2022 8:17:12 AM

Testimony for CPC on 3/21/2022 2:00:00 PM

<b>Submitted By</b>	<b>Organization</b>	<b>Testifier Position</b>	<b>Testify</b>
JON WHITE	Individual	Support	Written Testimony Only

Comments:

I am in strong support

**SB-2511-HD-1**

Submitted on: 3/20/2022 9:04:15 AM

Testimony for CPC on 3/21/2022 2:00:00 PM

<b>Submitted By</b>	<b>Organization</b>	<b>Testifier Position</b>	<b>Testify</b>
Paul Bernstein	Individual	Oppose	Written Testimony Only

Comments:

Aloha Chair Johanson, Vice Chair Kitagawa, and members of the House Consumer Protection and Commerce Committee:

I'm writing in opposition of SB2511 because I believe the wrong metric is being used to assess whether a tax credit should be granted. The bill should base the tax credit on emissions not the classification of renewable. To be consistent with our climate emergency, I believe we should be giving tax credits only for projects that lead to lower emissions. This bill would extend a credit to any firm renewable project, but this provision includes the burning of trees, which creates more greenhouse gas emissions than coal. If trees are replanted, then this offsets some of the emissions, but it takes at least 20 years before the trees become a net sequester of carbon. Meanwhile had the forest been allowed to stand, it would've been sequestering carbon during this 20 year period. Therefore, the bill needs to add language to account for the lifecycle emissions of biofuels.

Respectfully,

Paul Bernstein

**SB-2511-HD-1**

Submitted on: 3/20/2022 9:10:57 AM

Testimony for CPC on 3/21/2022 2:00:00 PM

<b>Submitted By</b>	<b>Organization</b>	<b>Testifier Position</b>	<b>Testify</b>
Ashley D.K McGuire	Individual	Support	Written Testimony Only

Comments:

I support it

**SB-2511-HD-1**

Submitted on: 3/20/2022 9:23:18 AM

Testimony for CPC on 3/21/2022 2:00:00 PM

<b>Submitted By</b>	<b>Organization</b>	<b>Testifier Position</b>	<b>Testify</b>
Suterra Soares	Individual	Support	Written Testimony Only

Comments:

Aloha,

I support this bill.

**SB-2511-HD-1**

Submitted on: 3/20/2022 9:25:03 AM

Testimony for CPC on 3/21/2022 2:00:00 PM

<b>Submitted By</b>	<b>Organization</b>	<b>Testifier Position</b>	<b>Testify</b>
Rob Duyao	Individual	Support	Written Testimony Only

Comments:

I support bill SB 2511 SD2 HD1 relating to taxation.

**SB-2511-HD-1**

Submitted on: 3/20/2022 9:37:53 AM

Testimony for CPC on 3/21/2022 2:00:00 PM

<b>Submitted By</b>	<b>Organization</b>	<b>Testifier Position</b>	<b>Testify</b>
Alika Maikui	Individual	Support	Written Testimony Only

Comments:

Support. Thank you.

**SB-2511-HD-1**

Submitted on: 3/20/2022 9:39:25 AM

Testimony for CPC on 3/21/2022 2:00:00 PM

<b>Submitted By</b>	<b>Organization</b>	<b>Testifier Position</b>	<b>Testify</b>
aulii fernandez	Individual	Support	Written Testimony Only

Comments:

Support.



**SB-2511-HD-1**

Submitted on: 3/20/2022 9:41:54 AM

Testimony for CPC on 3/21/2022 2:00:00 PM

<b>Submitted By</b>	<b>Organization</b>	<b>Testifier Position</b>	<b>Testify</b>
Georgette Nacis	Individual	Support	Written Testimony Only

Comments:

Support.

**SB-2511-HD-1**

Submitted on: 3/20/2022 9:43:50 AM

Testimony for CPC on 3/21/2022 2:00:00 PM

<b>Submitted By</b>	<b>Organization</b>	<b>Testifier Position</b>	<b>Testify</b>
aulani hood	Individual	Support	Written Testimony Only

Comments:

Please support.

**SB-2511-HD-1**

Submitted on: 3/20/2022 9:45:41 AM

Testimony for CPC on 3/21/2022 2:00:00 PM

<b>Submitted By</b>	<b>Organization</b>	<b>Testifier Position</b>	<b>Testify</b>
micah hood	Individual	Support	Written Testimony Only

Comments:

Support.

**SB-2511-HD-1**

Submitted on: 3/20/2022 10:13:40 AM

Testimony for CPC on 3/21/2022 2:00:00 PM

<b>Submitted By</b>	<b>Organization</b>	<b>Testifier Position</b>	<b>Testify</b>
joshua demello	Individual	Support	Written Testimony Only

Comments:

I strongly support this bill.

**SB-2511-HD-1**

Submitted on: 3/20/2022 10:14:50 AM

Testimony for CPC on 3/21/2022 2:00:00 PM

<b>Submitted By</b>	<b>Organization</b>	<b>Testifier Position</b>	<b>Testify</b>
Ray Tanonaka	Individual	Support	Written Testimony Only

Comments:

I fully support this bill.

**SB-2511-HD-1**

Submitted on: 3/20/2022 10:15:49 AM

Testimony for CPC on 3/21/2022 2:00:00 PM

Submitted By	Organization	Testifier Position	Testify
Keith Neal	Individual	Oppose	Written Testimony Only

Comments:

Strongly oppose SB2511

Very concerned regarding the definition of 'fuel'; "including firm renewable energy systems", "firm renewable" must not include the burning of trees, rubbish, fossil fuels.

The age of combustion is over, to continue, we do so at our collective peril.

A commissioned study by Massachusetts Department of Energy Resources concluded that burning trees to make electricity is worse for the climate than burning coal<sup>1</sup>.

**Wood is much less energy dense than coal**, so you have to burn a lot more of it to produce the same amount of electricity. As a result, burning wood produces higher emissions than coal (about 40 percent higher) for every unit of energy you generate;

**Trees take a long time to grow back.** Even with immediate replanting, it can take many decades or even centuries before a forest can remove the emissions created from burning it in the first place;

**Cutting forests eliminates an important carbon "sink"** that would otherwise continue capturing carbon from the atmosphere. Our forests currently absorb 15 percent of our carbon emissions each year. <sup>2</sup>

So called 'Bio-energy' crops are a bad idea.

In Hawaii nei, where the trade winds blow and the sun strong, energy must come from clean, renewable sources paired with energy storage.

Respectfully submitted,

Keith Neal

<sup>1</sup> "New study: burning trees for power worse for climate than burning coal" Nathanael Greene, June 11 2010 .

<https://www.nrdc.org/experts/nathanael-greene/new-study-burning-trees-power-worse-climate-burning-coal>

2 “Burning Trees for Electricity Is Actually Dirtier Than Coal” Feb 20, 2015

<https://www.ecowatch.com/burning-trees-for-electricity-is-actually-dirtier-than-coal-1882012730.html>

**SB-2511-HD-1**

Submitted on: 3/20/2022 10:16:06 AM

Testimony for CPC on 3/21/2022 2:00:00 PM

<b>Submitted By</b>	<b>Organization</b>	<b>Testifier Position</b>	<b>Testify</b>
Edward klaneski	Individual	Support	Written Testimony Only

Comments:

I am in strong support of this Bill.



**SB-2511-HD-1**

Submitted on: 3/20/2022 10:16:18 AM

Testimony for CPC on 3/21/2022 2:00:00 PM

<b>Submitted By</b>	<b>Organization</b>	<b>Testifier Position</b>	<b>Testify</b>
anthony padilla	Individual	Support	Remotely Via Zoom

Comments:

In strong support

**SB-2511-HD-1**

Submitted on: 3/20/2022 10:16:51 AM

Testimony for CPC on 3/21/2022 2:00:00 PM

<b>Submitted By</b>	<b>Organization</b>	<b>Testifier Position</b>	<b>Testify</b>
Chauncey Dunhour	Individual	Support	Written Testimony Only

Comments:

I am in strong support.

**SB-2511-HD-1**

Submitted on: 3/20/2022 10:17:32 AM

Testimony for CPC on 3/21/2022 2:00:00 PM

<b>Submitted By</b>	<b>Organization</b>	<b>Testifier Position</b>	<b>Testify</b>
Chaz Bajet	Individual	Support	Written Testimony Only

Comments:

I am in strong support

**SB-2511-HD-1**

Submitted on: 3/20/2022 10:18:03 AM

Testimony for CPC on 3/21/2022 2:00:00 PM

<b>Submitted By</b>	<b>Organization</b>	<b>Testifier Position</b>	<b>Testify</b>
Hubert Pruett	Individual	Support	Written Testimony Only

Comments:

I am in strong support

**SB-2511-HD-1**

Submitted on: 3/20/2022 10:18:34 AM

Testimony for CPC on 3/21/2022 2:00:00 PM

<b>Submitted By</b>	<b>Organization</b>	<b>Testifier Position</b>	<b>Testify</b>
Kekoa Masutani	Individual	Support	Written Testimony Only

Comments:

My name is Kekoa Masutani from kaneohe and I support SB2511.

**SB-2511-HD-1**

Submitted on: 3/20/2022 10:18:47 AM

Testimony for CPC on 3/21/2022 2:00:00 PM

<b>Submitted By</b>	<b>Organization</b>	<b>Testifier Position</b>	<b>Testify</b>
Dane Kaluhiwa	Individual	Support	Written Testimony Only

Comments:

I am in strong support

**SB-2511-HD-1**

Submitted on: 3/20/2022 10:20:37 AM

Testimony for CPC on 3/21/2022 2:00:00 PM

<b>Submitted By</b>	<b>Organization</b>	<b>Testifier Position</b>	<b>Testify</b>
Dave Teriirere	Individual	Support	Written Testimony Only

Comments:

I am strong support

**SB-2511-HD-1**

Submitted on: 3/20/2022 10:22:11 AM

Testimony for CPC on 3/21/2022 2:00:00 PM

<b>Submitted By</b>	<b>Organization</b>	<b>Testifier Position</b>	<b>Testify</b>
chad Failma	Individual	Support	Written Testimony Only

Comments:

I am in strong support



**SB-2511-HD-1**

Submitted on: 3/20/2022 10:21:22 AM

Testimony for CPC on 3/21/2022 2:00:00 PM

<b>Submitted By</b>	<b>Organization</b>	<b>Testifier Position</b>	<b>Testify</b>
Chad Amasiu	Individual	Support	Written Testimony Only

Comments:

I am in strong support

**SB-2511-HD-1**

Submitted on: 3/20/2022 10:22:41 AM

Testimony for CPC on 3/21/2022 2:00:00 PM

<b>Submitted By</b>	<b>Organization</b>	<b>Testifier Position</b>	<b>Testify</b>
Keenan Luke	Individual	Support	Written Testimony Only

Comments:

I am a strong support.

**SB-2511-HD-1**

Submitted on: 3/20/2022 10:22:57 AM

Testimony for CPC on 3/21/2022 2:00:00 PM

<b>Submitted By</b>	<b>Organization</b>	<b>Testifier Position</b>	<b>Testify</b>
Jonovan Tuinei	Individual	Support	Written Testimony Only

Comments:

I am in strong support of SB2511.

**SB-2511-HD-1**

Submitted on: 3/20/2022 10:23:14 AM

Testimony for CPC on 3/21/2022 2:00:00 PM

<b>Submitted By</b>	<b>Organization</b>	<b>Testifier Position</b>	<b>Testify</b>
Travis rabellizsa	Individual	Support	Written Testimony Only

Comments:

I am in strong support

**SB-2511-HD-1**

Submitted on: 3/20/2022 10:23:23 AM

Testimony for CPC on 3/21/2022 2:00:00 PM

<b>Submitted By</b>	<b>Organization</b>	<b>Testifier Position</b>	<b>Testify</b>
John Rabanal	Individual	Support	Written Testimony Only

Comments:

I am in strong support

**SB-2511-HD-1**

Submitted on: 3/20/2022 10:24:05 AM

Testimony for CPC on 3/21/2022 2:00:00 PM

<b>Submitted By</b>	<b>Organization</b>	<b>Testifier Position</b>	<b>Testify</b>
Cisco Valeho	Individual	Support	Written Testimony Only

Comments:

I strongly support SB2511

**SB-2511-HD-1**

Submitted on: 3/20/2022 10:24:10 AM

Testimony for CPC on 3/21/2022 2:00:00 PM

<b>Submitted By</b>	<b>Organization</b>	<b>Testifier Position</b>	<b>Testify</b>
Clinton Blackman	Individual	Support	Written Testimony Only

Comments:

I am in strong support

**SB-2511-HD-1**

Submitted on: 3/20/2022 10:24:43 AM

Testimony for CPC on 3/21/2022 2:00:00 PM

<b>Submitted By</b>	<b>Organization</b>	<b>Testifier Position</b>	<b>Testify</b>
Brennon Pias	Individual	Support	Written Testimony Only

Comments:

I am in strong support



**SB-2511-HD-1**

Submitted on: 3/20/2022 10:26:39 AM

Testimony for CPC on 3/21/2022 2:00:00 PM

<b>Submitted By</b>	<b>Organization</b>	<b>Testifier Position</b>	<b>Testify</b>
Blair Nahale	Individual	Support	Remotely Via Zoom

Comments:

I am in strong support of sb2511

**SB-2511-HD-1**

Submitted on: 3/20/2022 10:27:24 AM

Testimony for CPC on 3/21/2022 2:00:00 PM

<b>Submitted By</b>	<b>Organization</b>	<b>Testifier Position</b>	<b>Testify</b>
Kekoa Bruhn	Individual	Support	Written Testimony Only

Comments:

I am in strong support.

**SB-2511-HD-1**

Submitted on: 3/20/2022 10:27:36 AM

Testimony for CPC on 3/21/2022 2:00:00 PM

<b>Submitted By</b>	<b>Organization</b>	<b>Testifier Position</b>	<b>Testify</b>
Alana Kaili	Individual	Support	Written Testimony Only

Comments:

I am in strong support

**SB-2511-HD-1**

Submitted on: 3/20/2022 10:28:38 AM

Testimony for CPC on 3/21/2022 2:00:00 PM

<b>Submitted By</b>	<b>Organization</b>	<b>Testifier Position</b>	<b>Testify</b>
Louis Mansanas jr	Individual	Support	Written Testimony Only

Comments:

I strongly support this bill

**SB-2511-HD-1**

Submitted on: 3/20/2022 10:29:13 AM

Testimony for CPC on 3/21/2022 2:00:00 PM

<b>Submitted By</b>	<b>Organization</b>	<b>Testifier Position</b>	<b>Testify</b>
Jeffery Malavong	Individual	Support	Written Testimony Only

Comments:

I am in support of SB2511 SD2 HD1

**SB-2511-HD-1**

Submitted on: 3/20/2022 10:29:17 AM

Testimony for CPC on 3/21/2022 2:00:00 PM

<b>Submitted By</b>	<b>Organization</b>	<b>Testifier Position</b>	<b>Testify</b>
Robert Enriquez	Individual	Support	Written Testimony Only

Comments:

I am in strong support

**SB-2511-HD-1**

Submitted on: 3/20/2022 10:29:40 AM

Testimony for CPC on 3/21/2022 2:00:00 PM

<b>Submitted By</b>	<b>Organization</b>	<b>Testifier Position</b>	<b>Testify</b>
kodey saizon	Individual	Support	Written Testimony Only

Comments:

Iam In support

**SB-2511-HD-1**

Submitted on: 3/20/2022 10:30:38 AM

Testimony for CPC on 3/21/2022 2:00:00 PM

<b>Submitted By</b>	<b>Organization</b>	<b>Testifier Position</b>	<b>Testify</b>
Jacob Ramos	Individual	Support	Written Testimony Only

Comments:

I strongly support Bill SB2511.



**SB-2511-HD-1**

Submitted on: 3/20/2022 10:31:03 AM

Testimony for CPC on 3/21/2022 2:00:00 PM

<b>Submitted By</b>	<b>Organization</b>	<b>Testifier Position</b>	<b>Testify</b>
Manny Kulukulualani	Individual	Support	Written Testimony Only

Comments:

I strongly support SB2511

**SB-2511-HD-1**

Submitted on: 3/20/2022 10:31:25 AM

Testimony for CPC on 3/21/2022 2:00:00 PM

<b>Submitted By</b>	<b>Organization</b>	<b>Testifier Position</b>	<b>Testify</b>
Conan K Donahue	Individual	Support	Written Testimony Only

Comments:

I am in strong support.

**SB-2511-HD-1**

Submitted on: 3/20/2022 10:33:15 AM

Testimony for CPC on 3/21/2022 2:00:00 PM

<b>Submitted By</b>	<b>Organization</b>	<b>Testifier Position</b>	<b>Testify</b>
eddie Horner	Individual	Support	Written Testimony Only

Comments:

I strongly support this bill

**SB-2511-HD-1**

Submitted on: 3/20/2022 10:33:47 AM

Testimony for CPC on 3/21/2022 2:00:00 PM

<b>Submitted By</b>	<b>Organization</b>	<b>Testifier Position</b>	<b>Testify</b>
Clayton Glass	Individual	Support	Written Testimony Only

Comments:

I am in strong support.

**SB-2511-HD-1**

Submitted on: 3/20/2022 10:33:45 AM

Testimony for CPC on 3/21/2022 2:00:00 PM

<b>Submitted By</b>	<b>Organization</b>	<b>Testifier Position</b>	<b>Testify</b>
Ted Scott	Individual	Support	Written Testimony Only

Comments:

I am in Strong support of this bill

**SB-2511-HD-1**

Submitted on: 3/20/2022 10:35:14 AM

Testimony for CPC on 3/21/2022 2:00:00 PM

<b>Submitted By</b>	<b>Organization</b>	<b>Testifier Position</b>	<b>Testify</b>
Beatrice Cabral	Individual	Support	Written Testimony Only

Comments:

Support.

**SB-2511-HD-1**

Submitted on: 3/20/2022 10:35:33 AM

Testimony for CPC on 3/21/2022 2:00:00 PM

<b>Submitted By</b>	<b>Organization</b>	<b>Testifier Position</b>	<b>Testify</b>
Kahekili Fuchs	Individual	Support	Written Testimony Only

Comments:

I am in strong support of this bill.

**SB-2511-HD-1**

Submitted on: 3/20/2022 10:36:40 AM

Testimony for CPC on 3/21/2022 2:00:00 PM

<b>Submitted By</b>	<b>Organization</b>	<b>Testifier Position</b>	<b>Testify</b>
Tyler Yuu	Individual	Support	Written Testimony Only

Comments:

In strong support



**SB-2511-HD-1**

Submitted on: 3/20/2022 10:37:17 AM

Testimony for CPC on 3/21/2022 2:00:00 PM

<b>Submitted By</b>	<b>Organization</b>	<b>Testifier Position</b>	<b>Testify</b>
richard gideon	Individual	Support	Written Testimony Only

Comments:

I am in strong support.

**SB-2511-HD-1**

Submitted on: 3/20/2022 10:40:30 AM

Testimony for CPC on 3/21/2022 2:00:00 PM

<b>Submitted By</b>	<b>Organization</b>	<b>Testifier Position</b>	<b>Testify</b>
Pomai Kalama	Individual	Support	Written Testimony Only

Comments:

I am in strong support

**SB-2511-HD-1**

Submitted on: 3/20/2022 10:41:24 AM

Testimony for CPC on 3/21/2022 2:00:00 PM

<b>Submitted By</b>	<b>Organization</b>	<b>Testifier Position</b>	<b>Testify</b>
Noah Campbell	Individual	Support	Written Testimony Only

Comments:

I am in strong support of SB2511

**SB-2511-HD-1**

Submitted on: 3/20/2022 10:41:24 AM

Testimony for CPC on 3/21/2022 2:00:00 PM

<b>Submitted By</b>	<b>Organization</b>	<b>Testifier Position</b>	<b>Testify</b>
Trey Ah Yuen	Individual	Support	Written Testimony Only

Comments:

I am in strong support of this bill.

**SB-2511-HD-1**

Submitted on: 3/20/2022 10:44:36 AM

Testimony for CPC on 3/21/2022 2:00:00 PM

<b>Submitted By</b>	<b>Organization</b>	<b>Testifier Position</b>	<b>Testify</b>
seth ilae	Individual	Support	Written Testimony Only

Comments:

I am in strong support

**SB-2511-HD-1**

Submitted on: 3/20/2022 10:45:04 AM

Testimony for CPC on 3/21/2022 2:00:00 PM

<b>Submitted By</b>	<b>Organization</b>	<b>Testifier Position</b>	<b>Testify</b>
Burton Chun	Individual	Support	Written Testimony Only

Comments:

I strongly support this bill.

**SB-2511-HD-1**

Submitted on: 3/20/2022 10:47:08 AM

Testimony for CPC on 3/21/2022 2:00:00 PM

<b>Submitted By</b>	<b>Organization</b>	<b>Testifier Position</b>	<b>Testify</b>
Keoni Mendiola	Individual	Support	Written Testimony Only

Comments:

I am in strong support of SB2511.

**SB-2511-HD-1**

Submitted on: 3/20/2022 10:49:51 AM

Testimony for CPC on 3/21/2022 2:00:00 PM

<b>Submitted By</b>	<b>Organization</b>	<b>Testifier Position</b>	<b>Testify</b>
Gavin Concepcion	Individual	Support	Written Testimony Only

Comments:

I am strong support



**SB-2511-HD-1**

Submitted on: 3/20/2022 10:51:08 AM

Testimony for CPC on 3/21/2022 2:00:00 PM

<b>Submitted By</b>	<b>Organization</b>	<b>Testifier Position</b>	<b>Testify</b>
Montgomery Meyer	Individual	Support	Written Testimony Only

Comments:

I am in strong support of SB2511

**SB-2511-HD-1**

Submitted on: 3/20/2022 10:52:32 AM

Testimony for CPC on 3/21/2022 2:00:00 PM

<b>Submitted By</b>	<b>Organization</b>	<b>Testifier Position</b>	<b>Testify</b>
Jay Amina III	Individual	Support	Written Testimony Only

Comments:

I strongly support SB2511.

**SB-2511-HD-1**

Submitted on: 3/20/2022 11:00:32 AM

Testimony for CPC on 3/21/2022 2:00:00 PM

<b>Submitted By</b>	<b>Organization</b>	<b>Testifier Position</b>	<b>Testify</b>
Seth Holck	Individual	Support	Written Testimony Only

Comments:

I am in strong support

**SB-2511-HD-1**

Submitted on: 3/20/2022 11:00:36 AM

Testimony for CPC on 3/21/2022 2:00:00 PM

<b>Submitted By</b>	<b>Organization</b>	<b>Testifier Position</b>	<b>Testify</b>
Jason Yoshimura	Individual	Support	Written Testimony Only

Comments:

I am in strong support

**SB-2511-HD-1**

Submitted on: 3/20/2022 11:00:40 AM

Testimony for CPC on 3/21/2022 2:00:00 PM

<b>Submitted By</b>	<b>Organization</b>	<b>Testifier Position</b>	<b>Testify</b>
Adrian Kaleo Nakashima	Individual	Support	Written Testimony Only

Comments:

I am in strong support.

**SB-2511-HD-1**

Submitted on: 3/20/2022 11:09:50 AM

Testimony for CPC on 3/21/2022 2:00:00 PM

<b>Submitted By</b>	<b>Organization</b>	<b>Testifier Position</b>	<b>Testify</b>
Walter Walker	Individual	Support	Written Testimony Only

Comments:

I am in strong support this bill

**SB-2511-HD-1**

Submitted on: 3/20/2022 11:13:13 AM

Testimony for CPC on 3/21/2022 2:00:00 PM

<b>Submitted By</b>	<b>Organization</b>	<b>Testifier Position</b>	<b>Testify</b>
Douglas Hiu	Individual	Support	Written Testimony Only

Comments:

I strongly support this bill

**SB-2511-HD-1**

Submitted on: 3/20/2022 11:26:47 AM

Testimony for CPC on 3/21/2022 2:00:00 PM

<b>Submitted By</b>	<b>Organization</b>	<b>Testifier Position</b>	<b>Testify</b>
Charles	Individual	Support	Written Testimony Only

Comments:

I support SB2511 SD2 HD1



SB 2511 SD 2 HD 1 TESTIMONY

To: House Committee on Consumer Protection and Commerce  
Hearing on March 21, 2022 at 2:00 p.m.

From: John Kawamoto

Position: Oppose

Last year the Legislature declared a climate emergency by adopting S.C.R. 44, which acknowledges that we've done far too little to mitigate climate change. Our efforts have been paltry compared to what is needed to reduce carbon emissions.

Carbon emissions due to human activity are higher than ever before, and going even higher. Data from the Mauna Loa Observatory show that the concentration of carbon dioxide in the atmosphere has increased every year since 1959 until now. Hawaii is part of that frightening trend.

Carbon dioxide, once emitted, stays in the atmosphere for 300 to 1,000 years, according to NASA. We are observing only the beginning effects of climate change, and there is no button that can be pushed to stop it. In the coming decades, scientific data indicate that climate change will be devastating. We can only prevent a global climate catastrophe. The livability of Earth for future generations is at stake.

The Legislature has set targets of 100% renewable energy and zero carbon emissions. Due to the climate emergency, these targets should be moved up, and we should be moving as quickly as possible toward clean, renewable energy.

Of course, the fossil fuel industry would disagree with the urgency that is required. After all, they have a fiduciary duty to their shareholders. Their priority is not the well-being of society in general, much less future generations.

This bill encourages renewable energy, but not clean, renewable energy. Most forms of renewable energy are clean, but some are dirty -- even dirtier than coal, which is considered to be dirty energy.

This bill should not be passed because it does not embody the clean, renewable energy future that Hawaii should embrace.

**SB-2511-HD-1**

Submitted on: 3/20/2022 11:31:35 AM

Testimony for CPC on 3/21/2022 2:00:00 PM

<b>Submitted By</b>	<b>Organization</b>	<b>Testifier Position</b>	<b>Testify</b>
Wade Terlep	Individual	Support	Written Testimony Only

Comments:

I am in strong support on SB2511

**SB-2511-HD-1**

Submitted on: 3/20/2022 11:38:03 AM

Testimony for CPC on 3/21/2022 2:00:00 PM

<b>Submitted By</b>	<b>Organization</b>	<b>Testifier Position</b>	<b>Testify</b>
Rick DuVoisin	Individual	Support	Written Testimony Only

Comments:

Hawaii needs to encourage renewable energy and become energy independent.

**SB-2511-HD-1**

Submitted on: 3/20/2022 11:39:06 AM

Testimony for CPC on 3/21/2022 2:00:00 PM

<b>Submitted By</b>	<b>Organization</b>	<b>Testifier Position</b>	<b>Testify</b>
Ka'ena Paikai	Individual	Support	Written Testimony Only

Comments:

I am in strong support of this bill

**SB-2511-HD-1**

Submitted on: 3/20/2022 11:40:17 AM

Testimony for CPC on 3/21/2022 2:00:00 PM

<b>Submitted By</b>	<b>Organization</b>	<b>Testifier Position</b>	<b>Testify</b>
Levi Archuleta	Individual	Support	Written Testimony Only

Comments:

I am in strong support.

**SB-2511-HD-1**

Submitted on: 3/20/2022 11:44:26 AM

Testimony for CPC on 3/21/2022 2:00:00 PM

<b>Submitted By</b>	<b>Organization</b>	<b>Testifier Position</b>	<b>Testify</b>
Chris Tanaka	Individual	Support	Written Testimony Only

Comments:

I am in strong support of SB2511.

**SB-2511-HD-1**

Submitted on: 3/20/2022 11:44:47 AM

Testimony for CPC on 3/21/2022 2:00:00 PM

<b>Submitted By</b>	<b>Organization</b>	<b>Testifier Position</b>	<b>Testify</b>
kainalu paikai	Individual	Support	Written Testimony Only

Comments:

I am in strong support

**SB-2511-HD-1**

Submitted on: 3/20/2022 11:53:27 AM

Testimony for CPC on 3/21/2022 2:00:00 PM

<b>Submitted By</b>	<b>Organization</b>	<b>Testifier Position</b>	<b>Testify</b>
Kyle Miyahana	Individual	Support	Written Testimony Only

Comments:

I strongly support SB2511



**SB-2511-HD-1**

Submitted on: 3/20/2022 11:55:31 AM

Testimony for CPC on 3/21/2022 2:00:00 PM

<b>Submitted By</b>	<b>Organization</b>	<b>Testifier Position</b>	<b>Testify</b>
Brandon Parker	Individual	Support	Written Testimony Only

Comments:

I strongly support this bill

**SB-2511-HD-1**

Submitted on: 3/20/2022 12:03:36 PM

Testimony for CPC on 3/21/2022 2:00:00 PM

<b>Submitted By</b>	<b>Organization</b>	<b>Testifier Position</b>	<b>Testify</b>
Paquito KHD Capillan	Individual	Support	Written Testimony Only

Comments:

I strongly support sb2511

**SB-2511-HD-1**

Submitted on: 3/20/2022 12:12:14 PM

Testimony for CPC on 3/21/2022 2:00:00 PM

<b>Submitted By</b>	<b>Organization</b>	<b>Testifier Position</b>	<b>Testify</b>
zachary matsunaga	Individual	Support	Written Testimony Only

Comments:

I strongly support!

**SB-2511-HD-1**

Submitted on: 3/20/2022 12:15:08 PM

Testimony for CPC on 3/21/2022 2:00:00 PM

<b>Submitted By</b>	<b>Organization</b>	<b>Testifier Position</b>	<b>Testify</b>
Jerome K H Kupukaa	Individual	Support	In Person

Comments:

I am in strong support

**SB-2511-HD-1**

Submitted on: 3/20/2022 12:27:30 PM

Testimony for CPC on 3/21/2022 2:00:00 PM

<b>Submitted By</b>	<b>Organization</b>	<b>Testifier Position</b>	<b>Testify</b>
nepo leutu jr	Individual	Support	Written Testimony Only

Comments:

I am in strong support

**SB-2511-HD-1**

Submitted on: 3/20/2022 12:49:28 PM

Testimony for CPC on 3/21/2022 2:00:00 PM

<b>Submitted By</b>	<b>Organization</b>	<b>Testifier Position</b>	<b>Testify</b>
Maki Morinoue	Individual	Oppose	Written Testimony Only

Comments:

Aloha

My name is Maki Morinoue and I oppose SB2511.

It deserves a significant pause to listen and understand fully to the following organizations that have become public in opposition to Hawaii's first proposed Bioenergy (green tree burning) facility, Hu Honua. In stated opposition are Sierra Club (Hawaii Chapter), Sierra Club (Moku Loa Group), Surfrider Foundation, Olohana Foundation, Partnership for Policy Integrity, Pepeekeo Fisherman's Association, North Hawaii Action Network, Na Kupuna O Moku O Keawe, Life of the Land, 350Hawaii, Hawaii Island Citizen's Climate Lobby, Hui Aloha Aina, Hawaii Alliance for Progressive Action, Hawaiian Cultural Center of Hamakua, Environmental Caucus (Democratic Party of Hawaii), Climate Reality Project, Department of Commerce and Consumer Affairs, Division of Consumer Advocacy ('Consumer Advocate'), the Democratic Party of Hawaii and more. In May, 2018 the State Democratic Party overwhelmingly passed Resolution ENV: 2018-08: "Resolved, That The Democratic Party of Hawai'i urges the Public Utilities Commission, all elected and appointed officials of the State of Hawai'i and its various counties to withdraw support for Hu Honua Bioenergy, and any successors, which will have irreversible and deleterious consequences for the state's coastal waters and the planet's atmosphere;"

Please listen to your local residents who have thoughtfully and deeply researched the impact of SB2511 and have publically raised and exposed much of its environmental impact.

Mahalo  
Holualoa  
96725

**SB-2511-HD-1**

Submitted on: 3/20/2022 12:51:53 PM

Testimony for CPC on 3/21/2022 2:00:00 PM

<b>Submitted By</b>	<b>Organization</b>	<b>Testifier Position</b>	<b>Testify</b>
William Campbell	Individual	Support	Written Testimony Only

Comments:

I support SB2511 mahalo

**SB-2511-HD-1**

Submitted on: 3/20/2022 12:55:14 PM

Testimony for CPC on 3/21/2022 2:00:00 PM

<b>Submitted By</b>	<b>Organization</b>	<b>Testifier Position</b>	<b>Testify</b>
Sy Delizo	Individual	Support	Written Testimony Only

Comments:

I am in strong support for this bill.



**SB-2511-HD-1**

Submitted on: 3/20/2022 1:08:30 PM

Testimony for CPC on 3/21/2022 2:00:00 PM

<b>Submitted By</b>	<b>Organization</b>	<b>Testifier Position</b>	<b>Testify</b>
Zorich Palimoo	Individual	Support	Written Testimony Only

Comments:

I am in strong support

**SB-2511-HD-1**

Submitted on: 3/20/2022 1:39:32 PM

Testimony for CPC on 3/21/2022 2:00:00 PM

<b>Submitted By</b>	<b>Organization</b>	<b>Testifier Position</b>	<b>Testify</b>
David Chew	Individual	Support	Written Testimony Only

Comments:

I support tax credits for Firm Renewable projects

**SB-2511-HD-1**

Submitted on: 3/20/2022 1:43:17 PM

Testimony for CPC on 3/21/2022 2:00:00 PM

<b>Submitted By</b>	<b>Organization</b>	<b>Testifier Position</b>	<b>Testify</b>
Lawrence DeCosta III	Individual	Support	Written Testimony Only

Comments:

I am in strong support!

Lawrence DeCosta

**SB-2511-HD-1**

Submitted on: 3/20/2022 1:44:32 PM

Testimony for CPC on 3/21/2022 2:00:00 PM

<b>Submitted By</b>	<b>Organization</b>	<b>Testifier Position</b>	<b>Testify</b>
Gabriel	Individual	Support	Written Testimony Only

Comments:

I am in strong support of SB 2511.

**SB-2511-HD-1**

Submitted on: 3/20/2022 1:45:36 PM

Testimony for CPC on 3/21/2022 2:00:00 PM

<b>Submitted By</b>	<b>Organization</b>	<b>Testifier Position</b>	<b>Testify</b>
Sherri Thal	Individual	Oppose	Written Testimony Only

Comments:

Aloha,

I oppose SB2511 SD2 HD1 as it gives tax subsidies to the Biomass industry, and in particular, to the proposed Biomass power plant, Hu Honua/Honua Ola, on Hawaii Island. Biomass is NOT RENEWABLE ENERGY! Burning trees releases carbon as does the cutting down and the transport by diesel powered trucks of these trees to the plant. This is exactly the opposite of renewable!

Hawaii Island and the Hawaiian Islands needs to build and support the TRUE RENEWABLES: SOLAR, WIND, and HYDROELECTRIC power. The time has come to stop the lies.

Mahalo,

Sherri Thal, Kea'au, HI 96749

**SB-2511-HD-1**

Submitted on: 3/20/2022 1:55:18 PM

Testimony for CPC on 3/21/2022 2:00:00 PM

<b>Submitted By</b>	<b>Organization</b>	<b>Testifier Position</b>	<b>Testify</b>
logan freitas	Individual	Support	Written Testimony Only

Comments:

I am in strong support

**SB-2511-HD-1**

Submitted on: 3/20/2022 1:59:28 PM

Testimony for CPC on 3/21/2022 2:00:00 PM

<b>Submitted By</b>	<b>Organization</b>	<b>Testifier Position</b>	<b>Testify</b>
Kelsey Beck	Individual	Support	Written Testimony Only

Comments:

Support

**LATE**

**SB-2511-HD-1**

Submitted on: 3/20/2022 9:14:07 PM

Testimony for CPC on 3/21/2022 2:00:00 PM

<b>Submitted By</b>	<b>Organization</b>	<b>Testifier Position</b>	<b>Testify</b>
Dave Mulinix	Our Revolution Hawaii	Oppose	Written Testimony Only

Comments:

Aloha Committee,

My name is David Mulinix, I am the Cofounder & Statewide Organizer for Our Revolution Hawaii and on behalf of our 5,000 members and supporters statewide, we stand in **STRONG OPPOSITION** to SB2511 because **BURNING TREES FOR ENERGY IS BAD FOR THE CLIMATE**. We can't afford to keep pumping more CO2 into the atmosphere. 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.

Please vote in opposition to SB2511.

Mahalo for your kinda attention,

David Mulinix, Cofounder & Statewide Community Oranizer

Our Revolution Hawaii



**LATE**

**SB-2511-HD-1**

Submitted on: 3/21/2022 1:55:57 PM

Testimony for CPC on 3/21/2022 2:00:00 PM

Submitted By	Organization	Testifier Position	Testify
Christopher Dean	Recycle Hawaii and Clean the Pacific	Oppose	Written Testimony Only

Comments:

I really want to support this, but it needs to be amended so that Biomass is not considered as a renewable resource. Biomass is not a renewable resource. After clear cutting trees, the soil becomes a net emitter of CO2 for 10-20 years, and then it slowly begins to uptake CO2 and store it. But land is expensive and property owners who are willing to put their land into biomass, want a return on their investment, so they will always pressure the biomass operators to cut as frequently as possible. Most biomass operations put tree plantations (not forests) into a ten year rotation. This means that biomass plants will never recapture any of the CO2 they release and worse yet, they will be extracting existing CO2 from the soil and releasing that. Biomass plants release 150% more CO2 than Coal. Then there's the pelleting operation and the trucks and the heavy equipment and the injection wells and so forth. Then, on top of all that, continual extraction of carbon from the soil leaves it depleted and nutrient deprived to great depths. Of course, after the biomass operation has completely destroyed the top soil, so nothing will ever grow there except weeds, they'll pack up and leave town, just like mining companies do, thank you very much, good bye and good luck, you'll need it. Don't be conned by this. The myth of biomass as a renewable source of energy has been totally debunked by objective scientists who don't get paid by corporations.

You know what is firm, always on, 100% reliable, clean, predictable, lasts forever and is the cheapest source of energy in the world today? Solar/storage; bring back net metering and you'll see a rapid transition to non polluting energy. Better be quick about it though, because the permafrost is already in a self sustaining feedback loop of melting and releasing methane.

**LATE**

**SB-2511-HD-1**

Submitted on: 3/21/2022 7:59:11 PM

Testimony for CPC on 3/21/2022 2:00:00 PM

Submitted By	Organization	Testifier Position	Testify
David Hunt	Individual	Oppose	Written Testimony Only

Comments:

DO NOT PASS SB2511 SD2 HD1 or SB2510 HD1..!!

THESE CORRUPT BILLS SB2510 and SB2511 may have been amended slightly, but they are STILL a blatant good-ol-boy, backroom GIFT to the off-island, trillion-dollar, Franklin-Templeton investment group seeking to burn our trees (the earth's lungs), and literally "cut and run" leaving us with the waste, the pollution, the clear chainsaws, logging trucks, the CLEARCUTS and TRIPPLE-PRICED ELECTRICITY (at the mandated exclusion of truly CLEAN, sustainable solar energy!!!

As my friend Dr. Keeny states so succinctly:

SB2510 / 2511 seeks to require that a given percentage of Hawaii's electricity generation arise from 'firm renewable' sources.

1. 'Firm renewable' sources currently means 'bioenergy' (from burning chipped/pelletized green trees for power with minor input from 'wastewood') or Geothermal energy. Other sources are experimental. Geothermal is currently limited to Hawaii County.
2. The Bill specifies: "Firm renewable generation shall be a minimum of fifty-five per cent of renewable energy generation for each island." At a later time the Office of Planning and Sustainable Development and Hawaii Natural Energy Institute may propose to legislature this percentage be reduced. This high figure seems tailored to the Big Island's proposed bioenergy facility Hu Honua as there are currently 60MW of Solar with storage planned and the Geothermal facility is expanding to 46MW generation. So this bill would require addition of Hu Honua to add its proposed 21MW in order for 'firm-renewable' to reach 56% of renewable generation, over the 55% requirement of this proposal. 55% would be unthinkable for the other islands so later on the agencies and legislature would be expected to reduce this.
3. The State Office of Energy has stated that until the large oil fired facilities are retired late this decade or early 2030s the need for firm power on all islands is sufficiently satisfied.
4. The immediate intent of this bill thus blatantly relates to the Big Island Hu Honua bioenergy facility, though certainly geothermal could provide all of the Big Island's realistic firm renewable needs indefinitely.

5. The following are excerpts from a letter signed by 500 expert scientists in Feb. 2021 to leaders of the US, EU, Japan and Korea regarding Bioenergy:

(Please access the below link to see this entire letter and the impressive credentials of the signatories, which includes a former chair of the UN Intergovernmental Panel on Climate Change, US National medal of Science winner, President of the European Academies of Science, etc.)

“The undersigned scientists and economists commend each of you for the ambitious goals you have announced for the United States, the European Union, Japan and South Korea to achieve carbon neutrality by 2050. Forest preservation and restoration should be key tools for achieving this goal and simultaneously helping to address our global biodiversity crisis. We urge you not to undermine both climate goals and the world’s biodiversity by shifting from burning fossil fuels to burning trees to generate energy.”

“In recent years, there has been a misguided move to cut down whole trees or to divert large portions of stem wood for bioenergy, releasing carbon that would otherwise stay locked up in forests.”

“The result of this additional wood harvest is a large initial increase in carbon emissions .... As numerous studies have shown, this burning of wood will increase warming for decades to centuries. That is true even when the wood replaces coal, oil or natural gas.”

“Overall, for each kilowatt hour of heat or electricity produced, using wood initially is likely to add two to three times as much carbon to the air as using fossil fuels.”

"Government subsidies for burning wood create a double climate problem because this false solution is replacing real carbon reductions. Companies are shifting fossil energy use to wood, which increases warming, as a substitute for shifting to solar and wind, which would truly decrease warming.”

<https://www.documentcloud.org/documents/20482842-scientist-letter-to-biden-van-der-leyden-michel-suga-moon-february-11-2021>

6. Bioenergy is not ‘clean’. Hu Honua’s Clean Air Permit from the State Department of Health designates that the facility will emit 293,000 tons of Greenhouse Gas per year. This is approaching 1000 tons GHG per day.

7. It is well known that burning chipped or pelletized green trees as fuel for generating electricity releases 1.5x more greenhouse gas than burning coal per KWh of electricity produced. The IPCC Greenhouse Gas Inventory (2006) identifies 1.25x greater GHG ‘in the smokestack’ for burning wood than coal. The ‘efficiency’ of burning wood is 26% and the efficiency of coal is 33% in generating electricity, thus calculating the 1.5x factor.

8. Burning wood for electricity releases 1.5x more Greenhouse Gas than burning Coal, 2.2x more GHG than burning Oil, and 3x more GHG than burning natural gas, per kilowatt hour of electricity generated. The GHG Analysis presented to the PUC by Hu Honua in 2019 calculates their GHG emissions to be 1.95 tons CO<sub>2</sub>(e) per KWh electricity generated, compared with 0.91 tons for the replaced fossil fueled stations, or more that twice that of the replaced fossil fuel stations.

9. The Consumer Advocate for the DCCA testified to the PUC in September 2021 that over the

year life of the Hu Honua project, 58% of the electricity generation at Hu Honua would replace zero-emission renewable sources (wind, solar or geothermal) and 42% would be fossil fuels.

10. The Consumer Advocate concluded that, “approval of the (Hu Honua) A&R PPA (Power Purchase Agreement) does not seem reasonable or in the public interest at this time; and without additional justification, there are GHG emissions, environmental, health, and customer impact concerns that do not support a favorable ruling by the Commission”.

11. Hu Honua has designated that it will sell electricity to Hawaiian Electric at \$0.22 per KWh increasing gradually to above \$0.30 per KWh. Hawaii Island’s planned and already begun large solar (with storage) installations will sell their power to Hawaiian Electric at \$0.08 per KWh, approximately one third of what Hu Honua will charge. As a result of Hu Honua, the Hawaii Island ratepayer will pay more for their electricity for the 30 year life of the project.

12. It is understood that to reach ‘Carbon Neutrality’ from regrowth after harvest of trees for bioenergy demands restoration of forest mass plus GHG used in cutting and transport of trees, a process taking multiple decades to over a century. The Government of Canada’s website < Bioenergy Greenhouse Gas Calculator > is the only internet site found which calculates the accumulated greenhouse gas over time from burning green trees for power in relation to burning coal, oil and natural gas. It factors into its results the re-sequestration of CO<sub>2</sub> from regrowth of harvested trees or planting new trees. This website allows designation of speed of growth of the trees and the distance of transport of harvested trees to the power generating facility. Factoring ‘fast growing trees’ and 50 kilometers (30 miles) average transport from the harvested forests, this Calculator shows that, for Hu Honua, the accumulated GHG from burning trees for power (including the sequestration from regrowth of trees) will be greater than burning Coal for at least 70 years (best case scenario). Please access this Canadian government website at: < <https://apps-scf-cfs.rncan.gc.ca/calc/en/bioenergy-calculator> >

13. Kamehameha Schools, Hu Honua’s largest source of trees, has publicly stated that they will not regrow trees after the initial harvest, the first of 7 year harvest cycles for 30 years. No public commitment to regrowth from Parker Ranch, the other large source, has been made. No other large scale Hawaiian Islands source has been identified. Hu Honua’s wood will come as pellets from the Americas or Asia. The much larger AES on Oahu bioenergy conversion proposal will certainly fire with imported wood pellets. ‘Bioenergy’ will not contribute to Hawaii’s ‘energy self-sufficiency’. A forestry industry will not emerge. DLNR has stated they will plant or ‘protect’ 100 million trees by 2030 for carbon sequestration or environmental restoration. They will not allow harvest here.

14. The current drift in biomass policy and media discussions suggests, because of the reasons pointed out by the 500 scientists above, that within the next several years all subsidies and RPS considerations of biomass as carbon neutral will be withdrawn. From National Geographic, November, 2021, we find the following statement (referencing the UK, Europe’s largest bioenergy producer) under the Tagline: “As world leaders pledge more action on climate change, one so-called solution—burning trees for electricity—could undermine progress.” That statement: “In the European Union’s “Fit for 55” framework for reducing emissions by 55 percent by 2030, biomass energy is still labeled as carbon neutral. But in a report published in

2018, the U.K.'s Committee on Climate Change said biomass energy should be limited. The country has contracts extending subsidies through 2027, but when they end, the committee discouraged further use.”

The unfolding realities of the climate crisis will overtake the convenient economic considerations of bioenergy as Greenhouse Gas neutral. Subsidies will be withdrawn. This will lead to closure of most, if not all, bioenergy stations.

15. It is thus that the following organizations have become public in opposition to Hawaii's first proposed Bioenergy (green tree burning) facility, Hu Honua. In stated opposition are Sierra Club (Hawaii Chapter), Sierra Club (Moku Loa Group), Surfrider Foundation, Olohana Foundation, Partnership for Policy Integrity, Pepeekeo Fisherman's Association, North Hawaii Action Network, Na Kupuna O Moku O Keawe, Life of the Land, 350Hawaii, Hawaii Island Citizen's Climate Lobby, Hui Aloha Aina, Hawaii Alliance for Progressive Action, Hawaiian Cultural Center of Hamakua, Environmental Caucus (Democratic Party of Hawaii), Climate Reality Project, Department of Commerce and Consumer Affairs, Division of Consumer Advocacy ('Consumer Advocate'), the Democratic Party of Hawaii and more. In May, 2018 the State Democratic Party overwhelmingly passed Resolution ENV: 2018-08:

“Resolved, That The Democratic Party of Hawai'i urges the Public Utilities Commission, all elected and appointed officials of the State of Hawai'i and its various counties to withdraw support for Hu Honua Bioenergy, and any successors, which will have irreversible and deleterious consequences for the state's coastal waters and the planet's atmosphere;”

Mahalo for your consideration Tawn Keeney MD

**LATE**

**SB-2511-HD-1**

Submitted on: 3/22/2022 2:02:57 PM

Testimony for CPC on 3/21/2022 2:00:00 PM

<b>Submitted By</b>	<b>Organization</b>	<b>Testifier Position</b>	<b>Testify</b>
Christopher Finau	Individual	Support	Written Testimony Only

Comments:

I am in support