SB-2102
Submitted on: 1/29/2024 12:36:48 PM
Testimony for EET on 1/30/2024 1:01:00 PM

Submitted By	Organization	Testifier Position	Testify
Douglass S. Adams	Testifying for Department of Research & Development, County of Hawaii	Oppose	Written Testimony Only

Comments:

Chair DeCoite, Vice-Chair Wakai, and Members of the Committee on Energy, Economic Development, and Tourism

Chair Gabbard, Vice Chair Richards, and Members of the Committee on Agriculture and Environment:

Thank you for the opportunity to provide testimony **in opposition to SB2102**, which would eliminate "biomass" from the renewable portfolio standard definition of "renewable energy." Biomass has long been considered a renewable source of energy, as well as one of the most cost effective. The County of Hawai‘i acknowledges concern with the incineration of biomass, which can lead to the creation of greenhouse gas emissions as a part of the burning process. However, other methodologies for generating energy with biomass as a source input, especially when derived from municipal waste and wastewater, provide the potential for cost effective and renewable energy in a firm, fixed manner. Biomass continues to be a renewable source input that should remain within the portfolio of Hawai‘i's energy generation sources, especially as the County of Hawaii works diligently to replace fossil fuel imports with locally-generated renewable energy.

We strongly encourage the Committees to forward SB2102 with a NEGATIVE recommendation for Senate passage.

Thank you for your consideration and please contact me or our Energy Specialist, Riley Saito (808-323-4704), with any questions.

very respectfully,

Douglass S Adams

Director, Department of Research & Development

County of Hawai‘i

DEPARTMENT OF ENVIRONMENTAL SERVICES
KA ʻOIHANA LAWELAWE KAIĀPUNI
CITY AND COUNTY OF HONOLULU

1000 ULUʻŌHIʻA STREET, SUITE 308 • KAPOLEI, HAWAIʻI 96707
PHONE: (808) 768-3486 • FAX: (808) 768-3487 • WEBSITE: honolulu.gov

RICK BLANGIARDI
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ROGER BABCOCK, JR., Ph.D., P.E.
DIRECTOR
POʻO

MICHAEL O'KEEFE
DEPUTY DIRECTOR
HOPE POʻO

IN REPLY REFER TO:
WAS 24-19

January 29, 2024

The Honorable Lynn DeCoite, Chair
The Honorable Glenn Wakai, Vice Chair
and Members of the Committee on Energy, Economic Development, and Tourism
The Honorable Mike Gabbard, Chair
The Honorable Herbert M. "Tim" Richards, III, Vice Chair
and Members of the Committee on Agriculture and Environment
415 South Beretania Street
Honolulu, Hawaiʻi 96813

Dear Chairs DeCoite and Gabbard, and Vice Chairs Wakai and Richards, III:

SUBJECT: Senate Bill 2102 - Relating to Renewable Energy

The City and County of Honolulu's (City) Department of Environmental Services submits the following testimony in strong opposition to SB 2102, relating to Renewable Energy.

The City's waste-to-energy facility, H-POWER, receives and processes virtually all municipal solid waste (MSW) on Oahu. In 2022, H-POWER processed approximately 730,000 tons of MSW, reducing the volume of that waste by 90%, thereby conserving valuable landfill space, and generating up to 68.5 MW of electricity (up to 10% of Oahu's grid or enough to power 60,000 homes), helping to further the statewide goal for 100% renewable energy by 2045. 25,000 tons of metal were also extracted from the waste stream and recycled at H-POWER in 2022.

H-POWER is also a significant revenue source for the City. H-POWER generates about $130 million in revenues annually, including revenue from electricity sales ($75 million), disposal fees ($50 million), and recycled metals ($5 million).

If SB 2102 becomes law H-POWER will lose its status as a generator of renewable energy and the state will lose a major contributor to its renewable energy portfolio. Additionally, the City could stand to lose millions of dollars in revenue it generates from electricity sales.

Please feel free to contact me at (808) 768-3486 with any questions.

Sincerely,

Digitally signed by Babcock, Roger W
Date: 2024.01.29 12:39:10 -10'00'

Roger Babcock, Jr., Ph.D., P.E.
Director

HAWAII STATE ENERGY OFFICE
STATE OF HAWAII

JOSH GREEN, M.D.
GOVERNOR

SYLVIA LUKE
LT. GOVERNOR

MARK B. GLICK
CHIEF ENERGY OFFICER

235 South Beretania Street, 5th Floor, Honolulu, Hawaii 96813
Mailing Address: P.O. Box 2359, Honolulu, Hawaii 96804

Telephone: (808) 451-6648
Web: energy.hawaii.gov

Testimony of
MARK B. GLICK, Chief Energy Officer

before the
SENATE COMMITTEES ON
ENERGY, ECONOMIC DEVELOPMENT, AND TOURISM
AND
AGRICULTURE AND ENVIRONMENT

Tuesday, January 30, 2024
1:01 PM
State Capitol, Conference Room 229 and Videoconference

Providing Comments on
SB 2102

RELATING TO RENEWABLE ENERGY.

Chairs DeCoite and Gabbard, Vice Chairs Wakai and Richards, and members of the Committees, the Hawai‘i State Energy Office (HSEO) offers comments on SB 2102 that eliminates biomass from the renewable portfolio standard definition of "renewable energy."

The topic of bioenergy, which includes biomass, was evaluated in HSEO's 2024 publication, *Hawai’i Pathways to Decarbonization Report,* submitted to the Hawai‘i Legislature in December of 2023.[1] The relevant recommendation, the second item on page 10, is to consider lifecycle carbon intensity for biomass, biofuels, and certain hydrogen produced from renewable resources.

Recommendation

Update the HRS §269-91 to include lifecycle carbon intensity requirements for “renewable energy sources,” specifically *(7)*

[1] Hawaii State Energy Office. *Hawai’i Pathways to Decarbonization.* 2023. https://energy.hawaii.gov/wp-content/uploads/2024/01/Act-238_HSEO_Decarbonization_Report.pdf

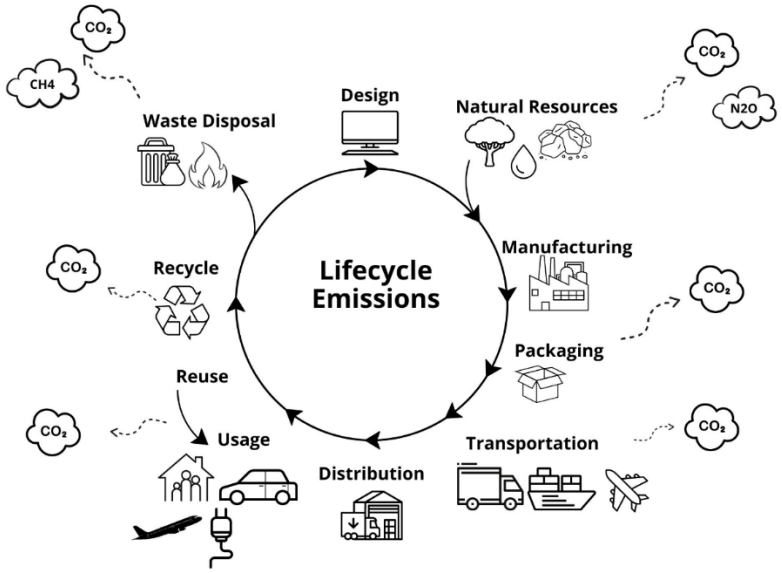
biomass and (8) biofuels, and (9) hydrogen produced from renewable energy.

Rationale

Certain biofuel and biomass energy sources exhibit lifecycle emissions higher than that of fossil fuels when evaluated “farm to pump.” While the PUC is required to evaluate lifecycle emissions, a carbon intensity threshold would clarify carbon requirements for all parties involved. Setting a maximum carbon intensity threshold does not negate the need for appropriate evaluation under HRS §269-6.

Discussion on this begins on page 218 of the report.[2]

Lifecycle greenhouse gas analysis quantifies or evaluates the environmental impact of specific products or systems throughout their entire lifecycle - from extraction and assembly through distribution, use, to disposal and more...



Lifecycle Analysis Considerations common for typical products consumed in the state.

Currently, the Hawai’i Public Utilities Commission (PUC) is required to “consider the need to reduce the State’s reliance on fossil fuels through energy efficiency and increased renewable energy

[2] Ibid, page 218.

> generation in exercising its duties" and is required to "explicitly consider" greenhouse gas emissions when making determinations on the reasonableness of the costs pertaining to the electric or gas utility system (HRS §269-96). This is a valuable analysis critical to ensuring energy projects for regulated utilities reduce net GHG emissions.
>
> While the PUC is required to consider the lifecycle greenhouse gas emissions when making project decisions, there are no set standards for the utility, or applicant, to follow when completing the lifecycle analysis, nor are there statutory mandates or thresholds (i.e., fuel standards or carbon intensity thresholds) that must be met by renewable energy projects with gross emissions. Further, most PPA applications' GHG analyses are completed in proprietary software, and system boundaries and assumptions are determined by the applicant. Recent dockets and Hawai'i Supreme Court decisions have underscored the role of the PUC in conducting project-specific GHG analyses for projects seeking PPAs…

Therefore, it may be more appropriate to set carbon intensity standards to incentivize low carbon energy resources and to penalize higher carbon energy resources rather than to completely eliminate a renewable resource. This should be done with accurate methodology and parameters to compare lifecycle carbon emissions. This approach would be consistent with Hawaii's Renewable Portfolio Standard that supports reducing carbon emissions in addition to the primary objective of moving beyond Hawai'i's dependence on imported fuels and continuing to grow a local renewable energy industry[3][4]

HSEO acknowledges the importance of reducing emissions of greenhouse gases and supports efforts to recognize the benefits of lower-carbon energy sources while continuing to strengthen and diversify Hawaii's energy supplies.

Thank you for the opportunity to testify.

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[4] Act 97, Session Laws of Hawaii 2015. https://www.capitol.hawaii.gov/slh/Years/SLH2015/SLH2015_Act97.pdf

TESTIMONY OF
LEODOLOFF R. ASUNCION, JR.
CHAIR, PUBLIC UTILITIES COMMISSION
STATE OF HAWAII

TO THE
SENATE COMMITTEES ON ENERGY, ECONOMIC DEVELOPMENT, AND TOURISM
AND AGRICULTURE AND ENVIRONMENT

January 30, 2024
1:01 p.m.

Chairs DeCoite and Gabbard, Vice Chairs Wakai and Richards, and Members of the Committees:

MEASURE: S.B. No. 2102
TITLE: RELATING TO RENEWABLE ENERGY.

DESCRIPTION: Eliminates biomass from the renewable portfolio standard definition of "renewable energy".

POSITION:

The Public Utilities Commission ("Commission") offers the following comments for consideration.

COMMENTS:

The Commission appreciates the intent of this measure to modify eligible sources under the Renewable Portfolio Standard ("RPS") to reduce electricity rates and greenhouse gases.

The Commission observes that section 269-6, Hawaii Revised Statutes (HRS), requires that the Commission explicitly consider greenhouse gases in its evaluation of electric and gas utility capital and operational costs. This section also recognizes that there may be tradeoffs between different resources in contributing to a diverse resource mix that is increasingly clean, local, and secure.

The Commission has worked diligently to balance these factors in its decision-making to ensure a reliable, economic, and environmentally sustainable energy system. To do so,

the Commission has developed processes with multiple layers of review to ensure that the resources serving the energy system meet and appropriately balance the above objectives. For example, the Commission requires thorough, expert greenhouse gas analyses for utility applications and reviews them diligently. Additionally, the Commission has implemented a Competitive Bidding Framework for Hawaiian Electric's selection of new resources, which creates a competitive market that weighs many factors such as price, impact to electric reliability, and greenhouse gases in selecting winning projects. These processes inherently support the Commission in evaluating the applications before it to ensure that they are aligned with State objectives and in the public interest. To date, these processes have typically resulted in the selection of large-scale solar and storage projects that are cost-effective and powered by non-emitting fuels.

The Commission observes that in 2022, biomass made up 3.6% of generation across the Hawaiian Electric territories and 9.7% of generation on Kauai. Modifying the RPS to eliminate biomass would require making up this lost renewable contribution via other sources. On Oahu, H-Power, a municipal solid waste generator at the Campbell Industrial Park, provides about 73 MW of firm energy and reduces the volume of refuse that goes to the landfill by 90%.

As drafted, the Commission notes that the measure would eliminate biomass crops from the definition of renewable energy. Given that biofuels, as defined under section 486J-1, HRS, can include those derived from biomass crops, this measure may reduce the State's ability to rely on certain biofuels for firm renewable energy going forward.

This measure would reduce the types of eligible resources for utility procurements, which would require rapid acquisition of replacement resources and may reduce the size of bidding markets for local renewable energy. However, it would provide clarity as to what resources the utilities and the Commission may consider under resource selection processes given the presently higher costs and greenhouse gas impacts of biomass resources.

Thank you for the opportunity to testify on this measure.

JOSH GREEN, M.D.
GOVERNOR | KE KIA'ĀINA

SYLVIA LUKE
LIEUTENANT GOVERNOR | KA HOPE KIA'ĀINA

STATE OF HAWAII | KA MOKUʻĀINA ʻO HAWAIʻI
OFFICE OF THE DIRECTOR
DEPARTMENT OF COMMERCE AND CONSUMER AFFAIRS
KA ʻOIHANA PILI KĀLEPA
335 MERCHANT STREET, ROOM 310
P.O. BOX 541
HONOLULU, HAWAII 96809
Phone Number: (808) 586-2850
Fax Number: (808) 586-2856
cca.hawaii.gov

NADINE Y. ANDO
DIRECTOR | KA LUNA HOʻOKELE

DEAN I HAZAMA
DEPUTY DIRECTOR | KA HOPE LUNA HOʻOKELE

Testimony of the Department of Commerce and Consumer Affairs

Before the
Senate Committee on Energy, Economic Development, and Tourism
And
Senate Committee on Agriculture and Environment

Tuesday, January 30, 2024
1:01 p.m.
Conference Room 229

On the following measure:
S.B. 2102, RELATING TO RENEWABLE ENERGY

Chair DeCoite, Chair Gabbard, and Members of the Committees:

My name is Michael Angelo, and I am the Executive Director of the Department of Commerce and Consumer Affairs' (Department) Division of Consumer Advocacy. The Department offers comments on this bill.

The purpose of this bill is to eliminate biomass from the renewable portfolio standard definition of "renewable energy."

The Department supports deployment of generation technology that is cost-effective and aligned with the State's energy policy and climate goals. The costs of biomass generated electricity are significantly more expensive on both a capital cost and operations and maintenance basis compared to other renewable energy technologies commonly deployed in Hawaii such as solar photovoltaics (PV) plus storage (U.S. Energy Information Administration, Annual Energy Outlook 2023). Greenhouse gases are

released into the atmosphere from the growth and burning of organic (carbon-containing) matter and the subsequent management and disposal of wastes. Hawaii Revised Statutes § 225-P establishes a zero emissions clean economy target to sequester more atmospheric carbon and greenhouse gases than emitted within the State as quickly as practicable, but not later than 2045.

Thank you for the opportunity to testify on this bill.

UNIVERSITY OF HAWAIʻI SYSTEM
ʻŌNAEHANA KULANUI O HAWAIʻI

Legislative Testimony
Hōʻike Manaʻo I Mua O Ka ʻAhaʻōlelo

Testimony Presented Before the
Senate Committee on Energy, Economic Development, and Tourism
Senate Committee on Agriculture and Environment
Tuesday, January 30, 2024 at 1:01 p.m.
By
Richard Rocheleau, Director
Hawaiʻi Natural Energy Institute
School of Ocean and Earth Science and Technology
And
Michael Bruno, PhD
Provost
University of Hawaiʻi at Mānoa

SB 2102 – RELATING TO RENEWABLE ENERGY

Chairs DeCoite and Gabbard, Vice Chairs Wakai and Richards, and members of the Committees:

The Hawaiʻi Natural Energy Institute (HNEI), offers comments on SB 2102 that proposes to eliminate biomass from the renewable portfolio standard definition of "renewable energy". The Hawaiʻi State Energy Office (HSEO) has submitted testimony referencing their recently completed Hawai'i Pathways to Decarbonization Report, submitted to the Hawaiʻi Legislature in December of 2023 and calling attention to one of the recommendations of that report to "consider lifecycle carbon intensity for biomass, biofuels, and certain hydrogen produced from renewable resources" and suggesting that it "may be more appropriate to set carbon intensity standards to incentivize low carbon energy resources and to penalize higher carbon energy resources rather than to completely eliminate a renewable resource".

HNEI has reviewed dozens of references analyzing LCA emissions for various energy technologies and conducted its own in-house analysis of these reports. The GHG emissions associated with the bioenergy sources, including biomass and biofuels were found to be highly dependent on the feedstock, the agricultural or forestry practices, and the processing to produce energy or fuel. Depending upon these conditions, LCA emissions from these bioenergy resources ranged from very beneficial compared to fossil fuels to similar or even worse than the combustion of oil. For these reasons HNEI agrees with the comments and recommendations made by HSEO.

Thank you for the opportunity to provide this testimony on SB 2102

To: The Honorable Chairs Lynn DeCoite and Mike Gabbard, the Honorable Vice Chairs Glenn Wakai and Tim Richards,

and Members of the Committees on Energy, Economic Development and Tourism and Agriculture and Environment

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

Re: **SB2102 RELATING TO RENEWABLE ENERGY**

Hearing: Tuesday January 30, 2024, 1:01 p.m., room 229

Aloha Chairs DeCoite and Gabbard, Vice Chairs Wakai and Richards, and Members of the Committees on Energy, Economic Development and Tourism and Agriculture and Environment!

The mission of the Climate Protectors Hawai‘i is to educate and engage the local community in climate change action, to help Hawai‘i show the world the way back to a safe and stable climate.

The Climate Protectors Hawai‘i STRONGLY SUPPORTS SB2102

Twenty years ago, the legislature established the State's renewable portfolio standards model to ensure that Hawaii's electric utility companies transition from using fossil fuels to renewable energy. At the time, biomass was considered an inexpensive and "carbon neutral" energy source.

However, **biomass energy is not inexpensive**. In recent years, the costs of alternative energy sources such as solar and wind power (backed up by battery and other means of storage) have dropped below the costs of power from most power plants fueled by wood. For example, the costs for the Kauai Island Utility Cooperative's Lawai Solar and Energy Storage Project average eleven cents per kilowatt hour, far below the cost of biomass plants.

Alternative energy sources such as solar and windpower have been seen as less reliable than combustion plants. With improved battery/storage technologies, however, alternative renewable sources now can be just as reliable as plants that burn wood, trash, or fossil fuels. For example, Plus Power is now operating its 185 MW Kapolei Energy Storage (KES) Facility on Oahu, an advanced grid scale battery energy storage system that helps keep the grid stable and supplies as much power as the retired AES coal plant did. Hawaiian Electric Company estimates that the KES facility will reduce electric bills by an average of $.28 per month.

Biomass energy also contributes to climate warming. Recent studies show that **burning trees will actually add to climate warming for at least the next several decades or longer.** Trees remove greenhouse gases from the atmosphere, but mature trees remove more carbon than saplings and it takes decades to regrow mature trees. **Burning trees is fifty per cent worse for the climate than burning coal** because wood is a less energy-dense fuel and much more must be burned to get the same amount of energy. According to the National Aeronautics and Space Administration, once carbon dioxide is emitted, it stays in the atmosphere for three hundred to one thousand years. Action taken now to reduce the emission of carbon dioxide from burning mature trees will affect the livability of the planet for generations. Recent data show that the rate and intensity of climate warming is greater than predicted. The years from 2013-2021 all rank among the ten warmest years on record, according to NOAA's National Centers for Environmental Information. **Providing incentives for biomass energy by including biomass in the renewable portfolio standard undermines the State's effort to reach the target of becoming carbon negative as soon as practicable but not later than 2045.** HRS Sec. 225P-5.

In order to reduce both electricity rates and greenhouse gases, **we should immediately disincentivize expensive and polluting biomass incineration by**

eliminating biomass from the renewable portfolio standard.

Please pass this bill!

Mahalo for the opportunity to testify!

Climate Protectors Hawai‘i (by Ted Bohlen)

Environmental Caucus of The Democratic Party of Hawai‘i

Sunday, January 28, 2024

To: Senate Committee on Energy, Economic Development, and Tourism
Hon. Lynn DeCoite, Chair
Hon. Glenn Wakai, Vice Chair

Senate Committee on Agriculture and the Environment
Hon. Mike Gabbard, Chair
Hon. Herbert M. “Tim” Richards, III, Vice Chair

Re: SB 2102 relating to Renewable Energy

Hearing: Tuesday, January 30, 2024, 1:01 p.m., Room 229 & videoconference

Position: Strong support

Aloha, Chairs Gabbard and DeCoite, Vice Chairs Richards and Wakai, and Members of the Committees on Agriculture and Environment and Energy, Economic Development, and Tourism:

The Environmental Caucus of the Democratic Party of Hawai‘i strongly supports SB 2102. This bill would remove biomass combustion from the renewable energy portfolio set forth in HRS §269-91. The reasons to do this are very well summarized in Section 1 of the bill. First, existing power plants that burn fossil fuels, wood, or trash are major contributors to climate warming. That is because climate warming is caused by excessive greenhouse gasses in the atmosphere. The most prevalent greenhouse gas is carbon dioxide, which is emitted when trash, trees, coal, oil, or gas, are burned. According to the National Aeronautics and Space Administration (NASA), once carbon dioxide is emitted, it stays in the atmosphere for three hundred to one thousand years.

As the bill states, action taken now to reduce the emission of carbon dioxide will affect the livability of the planet for generations. Recent data show that the rate and intensity of climate warming is greater than predicted. The years from 2013-2021 all rank among the ten warmest years on record, according to NOAA's National Centers for Environmental Information. And we all know that the last two years have been even warmer, even if we don’t yet have the data.

Twenty years ago, this Legislature established the State's renewable portfolio standards model to ensure that Hawaii's electric utility companies transition from using fossil fuels to renewable energy. At that time, biomass was erroneously considered to be a “carbon neutral” energy source.

Two major sources of biomass combustion are the burning of trees and the burning of waste. However, both need to be removed from the portfolio. Burning trees will actually add to climate warming for at least the next several decades or longer. Trees remove greenhouse gasses from the atmosphere, and mature trees remove more carbon than saplings. It simply takes decades to grow mature trees to replace the ones that have been burned.

Moreover, burning trees is 50 percent worse for the climate than burning coal because wood is a less energy-dense fuel and much more must be burned to get the same amount of energy. Waste incineration is even worse. It is the most expensive and polluting way to manage waste or to make energy. For the same energy output, trash incineration releases 65 percent more carbon dioxide than burning coal. Compared to landfilling, trash burning releases significantly more carbon pollution and is far more polluting generally.

In order to **reduce both electricity rates and greenhouse gasses**, we should immediately disincentivize expensive and polluting biomass incineration by removing biomass from the renewable portfolio standard.

For all these compelling reasons, logic and science dictate that we absolutely must remove “biomass” from the renewable energy portfolio standard definition of “renewable” described in HRS §269-91. There are better and cheaper methods of producing energy that are readily available.

Thank you for the opportunity to testify.

Melodie Aduja legislativepriorities@gmail.com
Alan B. Burdick burdick808@gmail.com
Co-Chairs,
Environmental Caucus of the
Democratic Party of Hawai‘i

SB-2102
Submitted on: 1/29/2024 9:19:01 AM
Testimony for EET on 1/30/2024 1:01:00 PM

Submitted By	Organization	Testifier Position	Testify
Dave Mulinix	Testifying for Greenpeace Hawaii	Support	Remotely Via Zoom

Comments:

Aloha Chair, CoChair & Committee,

Greenpeace Hawaii stands in Strong Support of SB2102 that will remove biomass from the Renewable Portfolio Standard definition of "Renewable Energy:. Biomass burning is not now, nor has it ever been a safe, clean, and efficient energy source.

Burning trees 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 which we no longer have. Waste incineration is the most expensive and polluting way to manage waste or to make energy. We are in a climate crisis and must make scientifically sound choices that will reduce greenhouse gas emissions as soon as possible if we hope to not exceed a 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.

Some important points to consider in support of this legislation:

- Twenty years ago, the legislature established the State's renewable portfolio standards model to ensure that Hawaii's electric utility companies transition from using fossil fuels to renewable energy. At that time, it was thought that burning biomass was "carbon neurtral." However, we've learned since then that there is nothing carbon neutral about burning biomass. Burning biomass is disasterous for the stability of our climate system. We need to update the renewable portfolio standard with scientifically sound choices. Action taken now to reduce these emissions will affect the livability of the planet for generations.

- Burning trees is fifty per cent worse for the climate than burning coal. Waste incineration is the most expensive and polluting way to manage waste or to make energy. To reduce both electricity rates and greenhouse gasses, we should stop biomass incineration by eliminating biomass from the renewable portfolio standard.

- Emissions from burning biomass for energy are a critical concern. This bill would address a flaw in the renewable portfolio standard (RPS) definition and remove biomass from the RPS definition of renewable energy. Burning biomass is not only expensive, it is a very dirty source of energy production and is actually worse than burning coal or other fossil fuels. This bill helps ensure proper consideration of the environmental effects of biomass burning for energy.

It is essential that we stop putting carbon into our atmosphere as quickly as possible,. and tjis bill is an important step in that right direction.

Please vote in support of SB2102.

Mahalo,

Dave Mulinix, CoChair, Greenpeace Hawaii

Chamber of Sustainable Commerce
P.O. Box 22394
Honolulu, HI
96823

CHAMBER OF SUSTAINABLE COMMERCE

Sen. Lynn Decoite, Chair
Sen. Glenn Wakai, Vice Chair
Comm. on Energy, Economic Dev. & Tourism

Sen. Mike Gabbard, Chair
Sen. Herbert M. "Tim" Richards, III, Vice Chair
Comm. on Agriculture & Environment

Tuesday, January 30, 2024
1:01 pm, EET
Conference Room 229 or via Zoom

RE: SB2102 Relating to Renewable Energy - Strong Support

Dear Chairs Decoite & Gabbard, Vice Chairs Wakai & Richards, and Members of the Committees,

The Chamber of Sustainable Commerce represents over 100 small businesses across the State of Hawaii that strive for a triple bottom line: people, planet and prosperity; we know we can strengthen our economy without hurting workers, consumers, communities or the environment. This is why we are in strong support of SB2102.

Thank you for finally cleaning up the state's definition of what is (and what is not) a "renewable energy" source. Burning biomass and solid waste as fuel emits green house gases that continue the exponential warming of our planet. The whole point of identifying "renewable resources" is to move away from fossil fuels because of the green house gases that have led to global warming and its harmful effects.

So much of our solid waste is plastic or other petroleum based materials - made up chemicals and fossil fuels.

Instead of burning biomass like eucalyptus on Hawaii island, we should use eucalyptus for wooden flooring. All the other organic matter that is burned in an incinerator for energy should go into earth to become carbon capturing soil. Composting is an important step in neutralizing the hundreds of tons of chemicals put into the land during decades of industrial mono-cropping pineapple and sugarcane.

Comments before
January 30, 2024
Senate EET / AEN Committee Hearing

SUPPORTING
Senate Bill 2102

Relating to Renewable Portfolio Standard

Mike Ewall, Esq.
Founder & Director
Energy Justice Network
215-436-9511
mike@energyjustice.net
www.EnergyJustice.net

Aloha Honorable Committee members. Energy Justice Network is a national organization supporting grassroots community groups to transition from pollution and harmful energy and waste management practices to clean energy and zero waste solutions. In Hawai'i, we've been working with residents who first sought our support in 2015. Since mid-2022, we have supported residents in forming the Hawai'i Clean Power Task Force and Kokua na Aina to address numerous energy and waste issues in the state.

We urge your support for Senate Bill 2102.

The effect of SB 2102 is to slightly accelerate HECO's installation of solar, wind, and other renewable energy sources under the state's Renewable Portfolio Standard (RPS) law. Counting existing polluters as renewable just delays the move to clean energy. The H-POWER trash incinerator is already financed through their long-term energy and waste contracts and is not going anywhere. Letting it take up space under the renewable energy mandate just keeps HECO from filling that space with clean energy.

Twenty states with RPS laws (a majority of them) do not count trash burning as renewable in these similar laws. Eleven states specifically exclude trash burning, including two (CA and DC) that used to include it and eliminated it from eligibility. Maryland is actively considering a similar bill and their state senate has passed it multiple times in recent years.

The point of a Renewable Portfolio Standard is to replace dirty energy sources such as fossil fuels with clean, renewable sources that don't burn up the climate and contribute to diseases and early death in nearby communities. Residents expect that renewable energy means wind and solar, not burning trash or trees. According to the Energy Information Administration, trash and tree burning are two of the most expensive types of power generation, far more expensive than wind and solar, even when accompanied by energy storage to make it firm energy.

Trash incineration should never have qualified, since it's dirtier than burning coal by most measures. According to EPA's best data, trash incinerators release 65% more carbon dioxide (CO_2) per unit of energy than coal burning does. Even with the modern pollution controls installed, incinerators also release more dioxins, mercury, lead, hydrochloric acid, carbon monoxide, and nitrogen oxides than a coal power plant does to make the same amount of energy. We've documented this at www.energyjustice.net/incineration/worsethancoal

Burning trees is also quite polluting. EPA data from across the country shows that burning trees is 50% worse for the climate than burning coal, and that some other harmful air pollutants can be comparable to coal burning. See our factsheet on woody biomass at www.energyjustice.net/files/biomass/woodybiomass.pdf

Please feel free to reach out for more information on biomass or waste incineration or related issues with the RPS program. Mahalo nui loa for your support for this important bill.

SB-2102
Submitted on: 1/29/2024 12:57:58 PM
Testimony for EET on 1/30/2024 1:01:00 PM

Submitted By	Organization	Testifier Position	Testify
Lisa Hallett	Testifying for Kokua na Aina	Support	Written Testimony Only

Comments:

Kokua na Aina strongly supports this bill.
Mahalo nui loa,

Lisa Hallett

SB-2102
Submitted on: 1/29/2024 11:00:37 AM
Testimony for EET on 1/30/2024 1:01:00 PM

Submitted By	Organization	Testifier Position	Testify
Ruta Jordans	Testifying for Zero Waste Kauai	Support	Written Testimony Only

Comments:

Biomass combustion is much more expensive than alternative electricity production.
Biomass produces more and dirtier particles in the air than any other electricity peoduction.
As long as Hawaii considers biomass burning "green," we are only fooling ourselves that we are doing as much as possible to lower green house gasses. It is time for Hawaii to make our green portfolio truly green by removing biomass.

Environmental Caucus of
The Democratic Party of Hawai'i

Energy & Climate Action Committee

Tuesday, January 30, 2024, 1:01 pm

Senate Committee on Energy, Economic Development, and Tourism
SENATE BILL 2102 – RELATING TO RENEWABLE ENERGY
Position: Strong Support

Me ke Aloha Chair DeCoite, Vice-Chair Wakai, and members of the Senate Committee on Energy, Economic Development, and Tourism:

SB2102 Eliminates biomass from the renewable portfolio standard definition of "renewable energy".

Energy and Climate Action Committee strongly supports this measure, as biomass combustion is not renewable under Hawaii's commitment to achieving 100% renewables by 2045. Biomass, moreover, is more polluting than coal, releasing more greenhouse gases (GHG) into the atmosphere at a time when climate change is accelerating, causing greater damage and threats to humans and other forms of life, causing disruption to economies and supplies to Hawaii, and undermining the insurance industry, among other things. Finally, biomass represents sunk investments that postpone investments into truly renewable energy sources, particularly solar, wind, and battery storage. Such sunk investments unwisely avoid the cheaper alternatives of truly renewable energy, which can provide more firm, reliable energy than combustion sources, as experienced on O'ahu recently with rolling blackouts.

Mahalo for providing the opportunity to address this matter.

/s/ Charley Ice, Chair, Energy and Climate Action Committee
Environmental Caucus of the Democratic Party

To: The Senate Committee on Energy, Economic Development, and Tourism (EET)
and
The Senate Committee on Agriculture and Environment (AEN)
From: Sherry Pollack, 350Hawaii.org
Date: Tuesday, January 30, 2024, 1:01pm

In strong support of SB2102

Aloha Chairs DeCoite and Gabbard, Vice Chairs Wakai and Richards, and members of the EET and AEN committees,

I am Co-Founder of the Hawaii chapter of 350.org, the largest international organization dedicated to fighting climate change. 350Hawaii.org is in **strong support of SB2102** which eliminates biomass from the renewable portfolio standard definition of "renewable energy".

Twenty years ago, the legislature established the State's renewable portfolio standards (RPS) model to ensure that Hawaii's electric utility companies transition from using fossil fuels to renewable energy. At that time, it was thought that burning biomass was "carbon neurtral." However, we've learned since then that there is nothing carbon neutral about burning biomass. In fact, emissions from burning biomass for energy are disasterous for the climate, and thus a very critical concern.

Burning biomass is a very dirty source of energy production and is actually worse than burning coal or other fossil fuels. Moreover, waste incineration is the most expensive and polluting way to manage waste or to make energy. We can help save ratepayers money while saving our climate if we disincentivize expensive and polluting biomass incineration by eliminating biomass from the renewable portfolio standard. SB2102 addresses this serious flaw in the RPS definition and helps ensure proper consideration of the environmental effects of biomass burning for energy.

We can't afford to keep pumping more CO2 into the atmosphere. We need to update the renewable portfolio standard with scientifically sound choices. Action taken now--or not, to reduce these emissions, will profoundly affect the lives of today's children and future generations, and how hospitable their world will be. I urge you to pass SB2102.

Thank you for the opportunity to testify on this extremely important measure.

Sherry Pollack
Co-Founder, 350Hawaii.org

SB-2102
Submitted on: 1/28/2024 2:00:05 PM
Testimony for EET on 1/30/2024 1:01:00 PM

Submitted By	Organization	Testifier Position	Testify
laurel brier	Testifying for Kauai Climate Action Coalition	Support	Written Testimony Only

Comments:

We have been following this legislation closely and believe it is private profit motivations that have interferred with its passage. Burning trees, buring trash, burning for energy is more polluting and GHG intensive than coal. It may be necessary at some times for firm energy needs when intermittment sources such as solar are not available but should not be considered part of the RPS. With the improvement of batteries and the development of new technologies such as wave energy, we should not frame burning as a 'renewable' or clean or necessary. We need to focus on energy sources that are low carbon, and present verbiage to the Renewable Standards Portfolio needs to reflex Hawaii's goals for a low carbon future. **Strong Support**

SIERRA CLUB OF HAWAIʻI

LATE

SENATE COMMITTEE ON ENERGY, ECONOMIC DEVELOPMENT AND TOURISM
SENATE COMMITTEE ON AGRICULTURE AND ENVIRONMENT

January 30, 2024 1:01 PM Conference Room 229

In SUPPORT of SB2102: Relating to Renewable Energy

Aloha Chair DeCoite, Chair Inouye, Vice Chair Wakai, Vice Chair Richards, and Members of the Committees,

On behalf of our over 20,000 members and supporters, the Sierra Club of Hawaiʻi offers the following testimony in **SUPPORT** of SB2102**,** which appropriately corrects the definition of "renewable energy" to exclude biomass as a "renewable" energy source.

The Sierra Club of Hawaiʻi emphasizes that the inclusion of biomass in our definition of "renewable energy" is wholly inconsistent with Hawaiʻi's interests in modeling appropriate climate action, enhancing public health, and building resilience in the face of our climate crisis. As noted in this measure's preamble, current biomass energy sources release incredibly high amounts of greenhouse gases and other toxins, moreso than even fossil fuels when compared to the amount of power produced. The carbon footprint impacts of biomass energy facilities also cannot be recovered in a timely manner, taking decades or longer to be rendered "carbon neutral" from the replanting of trees – time that we simply do not have given current climate science. Meanwhile, the human health impacts to adjacent communities exposed to biomass facility pollution may be irreversible. Finally, state policies uplifting biomass could also jeopardize our islands' food self-sufficiency and climate resilience, as they may incentivize the use of our very limited farmable land and water resources for fuel production rather than food cultivation.

Accordingly, the removal of biomass from the statutory definition of renewable energy would be consistent with Hawaiʻi's national recognition as a climate policy leader, as well as our public health and resiliency goals.

Accordingly, the Sierra Club respectfully urge the Committees to **PASS** SB2102. Thank you very much for this opportunity to testify.

ADA HAWAI'I
AMERICANS FOR DEMOCRATIC ACTION

OFFICERS
John Bickel, President
Alan Burdick, Vice President
Dave Nagajji, Treasurer

DIRECTORS
Melodie Aduja
Juliet Begley
Robert Kinslow
Jan Lubin
Shannon Matson
Jenny Nomura
Stephen O'Harrow
Maria Glodilet Rallojay
Bill South

MAILING ADDRESS
P.O. Box 23404
Honolulu

January 28, 2024

TO: Senator DeCoite & Members of the EET/AEN Committees

RE: SB 2102 RELATING TO RENEWABLE ENERGY.

Support for a Hearing on Jan 30

Americans for Democratic Action is an organization founded in the 1950s by leading supporters of the New Deal and led by Patsy Mink in the 1970s. We are devoted to the promotion of progressive public policies.

The ADA supports this bill as it would eliminate biomass from the renewable portfolio standard definition of "renewable energy". Biomass contributes to carbon emissions that cause global warming, perhaps at rates worse than coal. By excluding biomass from the definition, it eliminates a polluting form of energy production. We need to do this.

Thank you for your consideration.

Sincerely,

John Bickel, President

SanHi
GOVERNMENT STRATEGIES
A LIMITED LIABILITY LAW PARTNERSHIP

DATE: 1/30/2024

TO: Senator Lynn DeCoite
Chair, Committee on Energy, Economic Development and Tourism

Senator Mike Gabbard
Chair, Committee on Agriculture and Environment

Submitted Via Capitol Website

FROM: Mihoko Ito

RE: **S.B. 2102 – Relating to Renewable Energy**
Hearing Date: Tuesday, January 30, 2024 at 1:01 p.m.
Conference Room: 229

Dear Chair DeCoite, Chair Gabbard, and Members of the Joint Committees:

I submit this testimony on behalf of Covanta Energy, the operator of the HPOWER facility, in **opposition** to S.B. 2102. This measure proposes to remove biomass from the definition of renewable energy for the purposes of the renewable energy portfolio standard for the state.

Covanta respectfully urges the Committee to defer SB 2102 indefinitely. This bill would inappropriately remove Biomass from the Renewable Portfolio Standard (RPS) definition of Renewable energy. This would have the effect of removing waste-to-energy from the eligible sources of renewable energy in the Hawaii RPS.

The Covanta HPOWER facility does more than keep trash out of landfills. Each year, the waste-to-energy (WTE) facility produces enough energy to power 34,000 homes or charge 86,000 electric vehicles per year. This is critical, base load renewable energy that complements intermittent renewable energy sources like wind and solar, helping the world in its efforts to end its dependency on climate-damaging fossil fuels.

The fuel at the HPOWER plant comes from non-recyclable municipal solid waste that is diverted from landfills. This provides a steady source of renewable fuel that can be used to power businesses and homes.

First Hawaiian Center
999 Bishop Street, Suite 1400
Honolulu, HI 96813
T 808-539-0400
F 808-533-4945

While the process of producing energy from waste generates carbon emissions, these are offset by the greenhouse gasses avoided by keeping waste out of landfills, recycling metal and reducing the need for fossil fuel energy production. According to the EPA, combusting a ton of waste, instead of sending it to a landfill, keeps the equivalent of about a ton of carbon dioxide out of the atmosphere—an important victory in the battle against climate change.

HPOWER avoids 596,000 metric tons of GHGs annually which is equivalent to removing 147 thousand vehicles from the road for 1 year or displacing 736 million pounds of coal.

This is why countries across the globe, from Europe to Asia to the Middle East, view waste as a resource that should not simply be wasted but used as a renewable fuel.

For these reasons, we respectfully oppose this measure and ask the Committee to defer the bill.

Kauaʻi Island Utility Cooperative
Your Touchstone Energy® Cooperative

Testimony Before the Senate Committees on
Energy, Economic Development and Tourism and
Agriculture and Environment

By David Bissell
President and Chief Executive Officer
Kauaʻi Island Utility Cooperative
4463 Paheʻe Street, Suite 1, Līhuʻe, Hawaiʻi, 96766-2000

Tuesday, January 30, 2024; 1:01 pm
Conference Room #229 & Videoconference

Senate Bill No. 2102 - RELATING TO RENEWABLE ENERGY

To the Honorable Lynn DeCoite and Mike Gabbard, Chairs; Honorable Glenn Wakai and Herbert M. "Tim" Richards, III, Vice Chairs; and Members of the Committees:

Kauaʻi Island Utility Cooperative (KIUC) is a not-for-profit utility providing electrical service to more than 34,000 commercial and residential members.

KIUC opposes this legislation.

Since 2010, KIUC has increased its annual renewable generation from less than 10% to 60%. On most sunny days, KIUC operates its grid on 100% renewable energy for up to nine consecutive hours. KIUC has made this remarkable progress through continued use of legacy hydropower generation, and the integration of new renewable energy sources including: biomass, solar, battery energy solar systems, expanded hydro and biodiesel. In addition to having the highest percentage of renewables in the state, since May 2022, KIUC has posted the lowest residential electric rates in the state.

The State of Hawaiʻi has mandated electrical utilities to reach 100% renewable by 2045, and KIUC's Board of Directors has set a more aggressive goal of reaching 100% by 2033. To reach these goals, Hawaiʻi's utilities must be afforded the opportunity to consider the widest array of renewable technologies available. At least ten states include biomass in their definition of renewable energy, including California, Oregon and Washington. The U.S. Energy Information Administration includes biomass in its list of major types of renewable energy sources: https://www.eia.gov/energyexplained/renewable-sources/.

Each island is unique as to the type and quantity of potential renewable resources available. For example, on Kauaʻi, wind and geothermal are not feasible technologies. The Mahipapa biomass plant currently meets roughly 11% of Kauaʻi's annual electricity demand, and will continue to operate under a power purchase agreement (PPA) until 2036. The Mahipapa plant is a "closed loop" facility that uses fast growth eucalyptus trees for fuel. It is KIUC's understanding that these trees are available to use for fuel in approximately 8 year cycles, not the "decades" of growth time referred to in the proposed legislation. KIUC would want to consider all available options, including continued operation of the plant in some form, to ensure there is no resulting gap in renewable generation once the Mahipapa PPA expires.

KIUC believes that there is sufficient regulatory oversight to ensure any proposed biomass project is aligned with achieving the state's renewable energy goals. Any proposed new renewable generating source must be approved by the Hawaiʻi Public Utilities Commission. Depending on the nature and location of the project, other regulatory processes – including Chapter 343 compliance – may be required.

Mahalo for your consideration.

SB-2102
Submitted on: 1/29/2024 12:43:37 PM
Testimony for EET on 1/30/2024 1:01:00 PM

Submitted By	Organization	Testifier Position	Testify
Chris Chwastyk	Testifying for Hawaii Forest Industry Association	Oppose	Written Testimony Only

Comments:

HFIA opposes SB2102

Testimony to
The Committees on Energy, Economic Development, and
Tourism and Agriculture and Environment

Tuesday, January 30, 2024, 1:01 PM
Conference Room 229 & VIA videoconference, Hawaii State Capitol

SB 2102

Chairs DeCoite and Gabbard, Vice Chairs Wakai and Richards, and members of the committees,

Hawaii Clean Power Alliance **strongly opposes SB 2102,** which eliminates biomass from the renewable portfolio standard definition of "renewable energy."

Hawaii is at a crossroads of meeting renewable energy and decarbonization policy goals while providing reliable energy that utilizes all available natural resources. The recent grid blackouts underscore how every renewable energy technology is needed when one resource is unavailable and old generators are unpredictable.

The Federal Department of Energy recognizes biomass as a renewable energy source, derived from plant and algae-based materials such as crop waste, grasses, microalgae, and food waste. It can be converted into biogas which can make renewable gas in a pipeline or liquid such as biodiesel, biofuel that can be used in electric generators, be substituted for gasoline jet and diesel fuel.

Biomass technologies enable the reuse of carbon from biomass and waste streams to reduce carbon emissions from cars, jets, ships, and electricity. Decaying invasive species produce carbon dioxide and can be put to good use by repurposing it into biomass energy instead of in the landfill.

Biomass is *any* recently living organic material and crops such as flowers and grasses and is the number one renewable feedstock contributing 37% of the renewable energy sources in 2022, enabling the renewable energy transformation in the United States according to the independent and impartial U.S. Energy Information Administration (EIA).[1]

[1] https://www.eia.gov/energyexplained/us-energy-facts/

Renewable biodiesel, is a biomass-based diesel fuel and can be used to replace gasoline for transportation and other biofuels made from biomass feedstock is also the current replacement for jet fuel called sustainable aviation fuel (SAF) or alternative jet fuel (AJF).[2]

Additionally, according to the Department of Energy, the benefits of a robust bioenergy industry utilizing biomass can help to secure a sustainable and economically stable and growing future by supplying non-imported domestic regenerating clean energy sources, reduce our dependence on foreign oil, generate local U.S. jobs (in labor, technicians, and farming) and revitalize rural communities.

The current HRS §269-91 defines biofuels produced from organic sources such as biomass crops, agricultural residues, oil crops, food waste, animal, and landfill waste. Biomass in the statute is defined as biomass crops, agricultural and animal residues and wastes, and municipal solid waste another solid waste.

Hawaii still utilizes approximately 60% fossil fuel to make energy, and petroleum accounts for about four-fifths of Hawaii's energy consumption, the highest share for any state. Petroleum is the largest import of the state, with approximately 35 million barrels of crude oil processed in a year and over $3 Billion dollars a year. This contributes to the highest electricity rate in the nation (triple the US average).

Eliminating biomass from the renewable definition takes away a very important source of organic and local natural resource energy that can eliminate oil imports and negatively impacts our sustainable energy future, our energy security, our national security, jobs and the economy.

We request that the legislature defer this bill.

Thank you for the opportunity to testify.

[2] https://www.eia.gov/energyexplained/biofuels/biodiesel-rd-other-basics.php

January 30, 2024

COMMITTEE ON ENERGY, ECONOMIC DEVELOPMENT & TOURISM
Sen. Lynn DeCoite, Chair; Sen. Glenn Wakai, Vice Chair; and Committee Members
COMMITTEE ON AGRICULTURE AND ENVIRONMENT
Sen. Mike Gabbard, Chair; Sen. Herbert Richards III, Vice Chair; and Committee Members
Public Hearing, January 30, 2024 at 1:00 p.m., Conference Room 229

TESTIMONY of WILLIAM F. ANONSEN
MANAGING PARTNER/PRINCIPAL of THE MARITIME GROUP, LLC
IN OPPOSITION of SB 2102 (Biofuels – Renewable Energy)

My name is William Anonsen and I am the Managing Partner/Principal of THE MARITIME GROUP, LLC. We oppose SB 2102 in its current form which proposes to completely eliminate the use of various biomass energy sources from Hawaii's renewable portfolio. The use of specific biofuels sources helps in the responsible development of a Hawaii Green Fuels initiative coupled with various elements that can improve the food production sectors, which could be extended to applications in the energy power generation and transportation sectors. In addition, biomass helps to advance forest restoration and fire resilience by incentivizing biomass energy development as a method to reduce hazardous fuel build-up in fire-prone areas, such as the recent devasting fire on Maui.

Mother Nature had always satisfied man's energy needs in a renewable manner, until the industrial revolution pushed mankind to start exploiting the earth's fossil reserves: coal, fossil oil and natural gas. These energy reserves, although abundantly available, are not unlimited and are damaging our environment. The current and future circumstances necessitate that renewable energy programs be accelerated, with biofuels options serving to be a primary solution to address these energy requirements. Biofuels are an excellent option with their high efficiency providing the reliable and consistent firming of Hawaii's power grid, which are being supplemented by intermittent energy sources such as photovoltaic solar systems and wind turbines. Collectively these renewable energy sources will ensure we meet our RPS mandates.

Biofuels are a renewable energy source in that they are created from plants that can be regrown each year. The use of biofuels is basically carbon neutral, since the carbon produced when burning them is offset by the carbon consumed by the plants they came from. In Hawaii, biofuels can help reduce the dependence on foreign oils. Hawaii has the ideal climate year-round and soil conditions for biofuel crops; to produce a renewable and clean, local sustainable source of energy.

<u>The potential benefits of biofuels are immense, to include, but are not limited to:</u>

- Ability to provide significant livestock feedstock for cattle ranches, cow dairies, etc.;
- Help to support forest restoration and fire resilience, reducing hazardous fuel-build-up;
- Creation of new and increased markets for local produced agricultural products;
- Suitable lands that are currently underutilized will be put to the production, enhancing productivity;

- Enhancing energy security and energy independence, in electricity power and the transport sector;
- Contribution to a cleaner environment through reducing greenhouse gas and vehicular emissions;
- Helping to eliminate climate-changing fossil fuel, with clean, local and sustainable source of energy;
- Creation of rural employment and diversification of the rural economy;

<u>The following are some recommendations for the committee's consideration;</u>

- Establishment of an implementation plan for a comprehensive Hawaii Green Fuels initiatives coupled with a biofuels program, to include state policies and strategies for the production and marketing of biofuels;
- Increased awareness of the potential for the production of biofuels throughout the state;
- Set up an institutional framework to promote biofuels by establishing a Biofuels Development Board or a similar autonomous organization to coordinate all aspects of the biofuel program;
- Study the available international experience in all aspects of biofuels including policies, feedstocks, technologies and business models;
- Formulate and adopt holistic and biofuels friendly policies and a workable and practical implementation strategy;
- Showcase pilot projects to demonstrate technology and the workability of the biofuel program.

The establishment and use of specific biofuel sources can be another critical step forward to significantly enhance our state's energy security, energy independence, fire resilience, and assist with our food security for livestock feed in a fiduciary environmentally responsible and economic manner. We can all be very proud that Hawaii is the first U.S. state to adopt this renewable energy standard, the most aggressive clean energy goal in the country, which is workable and is achievable.

Mahalo for the opportunity to comment in opposition to SB 2102

Sincerely,

William F. Anonsen

William F. Anonsen
Managing Partner/Principal

1000 Auahi St, Suite 1509, Honolulu, Hawaii, 96814
Tel: (808) 589-1223 www.The-Maritime-Group.com

P.O. Box 253, Kunia, Hawai'i 96759
Phone: (808) 848-2074; Fax: (808) 848-1921
e-mail info@hfbf.org; www.hfbf.org

January 30, 2024

HEARING BEFORE THE
SENATE COMMITTEE ON ENERGY, ECONOMIC DEVELOPMENT, AND TOURISM
SENATE COMMITTEE ON AGRICULTURE AND ENVIRONMENT

TESTIMONY ON SB 2102
RELATING TO RENEWABLE ENERGY

Conference Room 229 & Videoconference
1:01 PM

Aloha Chairs DeCoite and Gabbard, Vice-Chairs Wakai and Richards, and Members of the Committees:

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

The Hawaiʻi Farm Bureau opposes SB 2102, which eliminates biomass from the renewable portfolio standard definition of "renewable energy."

Biomass is made from agricultural crops that are intentionally grown and harvested by farmers and also includes utilizing waste such as Albizia and municipal waste. Biomass creates opportunities for local farmers to grow and harvest biomass crops for generations, providing them with stable and long-term contracts for 20+ years. These contracts can help stabilize the future economic viability of farmers by providing them with a stable income that can enable them to invest in and grow their operations.

By eliminating biomass from the definition of renewable energy, Hawaii will continue to use imported fossil fuels and rely on intermittent renewable energy. We have just experienced blackouts due, in part to the variability of natural resources and the unpredictability of old fossil fuel plants.

Eliminating Biomass from the renewable definition would put the newly announced renewable bioenergy plants at risk because they would now be considered non-renewable and in the same category as fossil fuels. Additionally, highly skilled short-term and long-term jobs would be eliminated to run those facilities.

Hawaii can now stop importing oil and benefit from locally grown biomass crops, which helps farmers and keeps the money in our economy, stabilizing the cost of feedstock for generations.

Please defer SB 2102 and support the agriculture community that grows biomass crops.

Thank you for the opportunity to testify on this important matter.

Email: communications@ulupono.com

SENATE COMMITTEES ON ENERGY, ECONOMIC DEVELOPMENT & TOURISM AND AGRICULTURE & ENVIRONMENT
Tuesday, January 30, 2024 — 1:01 p.m.

Ulupono Initiative respectfully opposes SB 2102, Relating to Renewable Energy.

Dear Chair DeCoite, Chair Gabbard, and Members of the Committees:

My name is Micah Munekata, and I am the Director of Government Affairs at Ulupono Initiative. We are a Hawai'i-focused impact investment firm that strives to improve the quality of life throughout the islands by helping our communities become more resilient and self-sufficient through locally produced food, renewable energy, clean transportation choices, and better management of freshwater resources.

Ulupono respectfully opposes SB 2102, which eliminates biomass from the renewable portfolio standard definition of "renewable energy."

Hawai'i needs all viable forms of renewable energy to meet the 100% renewable portfolio standard by 2045. The Hawai'i State Energy Office's recently published Hawai'i Pathways to Decarbonization Report identifies, among other things, the significant need for additional renewable energy generation to meet broader economy-wide decarbonization goals.[1] Wind and solar alone are not enough. Additional sources such as biomass, biofuels, hydrogen and geothermal will also be necessary. When developed correctly, biomass can offer a reliable energy source that complements the intermittency of solar and wind, ensuring a balanced electrical grid.[2] Moreover, by utilizing organic waste, biomass energy could aid in effective waste management, reducing landfill usage and methane emissions.

Ulupono asserts that it is premature to constrain renewable energy technologies, considering the significant need for additional electricity generation in the coming decades. A diversity of renewable energy technologies is essential to reduce reliability risks and ensure adequate generation and avoid overly relying on energy storage. Energy storage is not generation, and an impact on the ability to generate power to charge batteries creates possible reliability and resilience risks at scale. Furthermore, there are significant concerns related to the amount of land needed for utility scale solar projects that may compete with other important uses, such as affordable housing, conservation, and sustainable local agriculture.

Thank you for the opportunity to testify.

Respectfully,

Micah Munekata
Director of Government Affairs

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[1] Hawai'i Pathways to Decarbonization Act 238, Session Laws of Hawai'i 2022, Report to the 2024 Hawai'i State Legislature December 2023. https://energy.hawaii.gov/wp-content/uploads/2024/01/Act-238_HSEO_Decarbonization_Report.pdf

[2] While there have been an increase in battery storage investments within the last several years and an increase in battery paired solar development, there remains a significant amount of intermittent renewable generation on the grid currently that are not paired with batteries.

January 29, 2024

Testimony to
The Committees on Energy, Economic Development, and Tourism and Agriculture and Environment

Tuesday, January 30, 2024, 1:01 PM
Conference Room 229 & VIA videoconference, Hawaii State Capitol

SB 2102

Chairs DeCoite and Gabbard, Vice Chairs Wakai and Richards, and members of the committees,

Biomass Power Association represents standalone power facilities across the country that use organic fuels like forestry residues and thinnings, and agricultural byproducts like oat and rice hulls. Our members are located primarily in locations with thriving forest products industries. We also have members in places with severe fire risk due to overgrown forests and invasive vegetation, like Hawaii. Biomass accounts for a small but significant portion of Hawaii's renewable fuels makeup. According to the U.S. Energy Information Administration (EIA), biomass accounted for less than 3% of the state's total energy generation in 2022.

We commend the State for carefully considering ways to address, and hopefully reverse, the threat of climate change. State governments can have an enormous impact on the carbon emissions not only within the state but also on power facilities located outside state borders that sell power into the state. By supporting a rich combination of power sources, a state can advance goals in other related areas like forest management, watershed management, economic development, and transportation.

We urge Hawaii to preserve the status of biomass as a renewable energy source by NOT adopting SB 2102. Aside from supplying the state with a small portion of its current carbon neutral electricity generation – about 9% of all renewable energy generation in the state in 2022 according to EIA data – biomass is a critical end user for forestry and agricultural waste. Biomass power facilities are a good source of jobs, and they consume woody waste material like tops and limbs from the invasive tree species that are removed for native plant growth. For instance, the Kauai Island Utility Cooperative relies on biomass energy to productively dispose of the invasive Albizia tree. The plant fibers used to generate biomass power are typically unusable for other wood products, and emit methane gas during decomposition if left on the forest floor.

Further, biomass power provides a crucial, baseload, renewable replacement for fossil fuels. In 2017, the Biomass Power Association commissioned a study to determine the extent of carbon savings that can be achieved by opting for biomass over natural gas, a

fossil fuel which is 50% less carbon emitting than coal. We retained Dr. Madhu Khanna, Distinguished Professor in Environmental Economics at the University of Illinois Department of Agricultural and Consumer Economics, and Dr. Puneet Dwivedi, Assistant Professor in Sustainability Sciences at the University of Georgia Warnell School of Forestry and Natural Resources. They examined the carbon intensity of a 50-megawatt capacity biomass power facility in New Hampshire with a 43-megawatt net output on the electric grid, comparing it to that of a typical combined cycle natural gas facility. Their report is attached as Exhibit A and can be found on the Biomass Power Association website.

Dr. Khanna and Dr. Dwivedi found that the use of organic residues as fuel in a biomass power plant instead of natural gas in a combined cycle facility results in immediate carbon savings of 115%, with 98% carbon savings over 100 years. Like the vast majority of biomass power facilities in the United States, the subject of the study uses organic residues to generate power supplied to the electric grid. The fuels used at this facility are residues left over from harvesting fiber for local lumber and paper mills: tops, limbs and other forestry byproducts. These low-value, "waste-like" materials are generated whether they are used for power or left to decay. If not used by biomass power plants, the materials typically remain in the forest as slash piles. In certain environments, woody waste left to decay can pose a severe fire risk.

The avoidance of carbon and methane emissions by removing from the forest and using materials that decay results in a significant GHG reduction over time. While the decay of these materials releases small amounts of methane consistently over time, the methane gas has at least a 21 times higher global warming impact on the climate than carbon dioxide.

Further, with new federal incentives for carbon capture and sequestration technology, and rapid technological advances being made in this area, biomass with carbon capture can become one of the only viable techniques that allows for the removal of atmospheric carbon. While the technology is still developing, we are optimistic that our members will soon be able to contribute to reducing the impacts of climate change in an even more meaningful way.

Biomass is an essential part of any carbon reduction program, not only for its environmental benefits but also for its contributions to the green economy, in particular the jobs it provides. We look forward to working with the State of Hawaii to ensure that biomass is included in its renewable portfolio. Please contact me with any questions at 202-494-2493 or carrie@usabiomass.org.

Sincerely,

Carrie Annand

Carrie Annand
Executive Director
Biomass Power Association

SB-2102
Submitted on: 1/29/2024 12:40:28 PM
Testimony for EET on 1/30/2024 1:01:00 PM

Submitted By	Organization	Testifier Position	Testify
Matthew Geyer	Individual	Support	In Person

Comments:

Aloha Chair DeCoite, Chair Gabbard, and members of the EET and AEN committees,

I support SB2102 we need to remove biomass from the RPS. We cannot preserve our environment by cutting down and burning trees and other sources of biomass. We need clean sources of energy like wind and solar with battery backup systems, not polluting smokestacks from burning trash and trees.

Mahalo

Matthew Geyer

SB-2102
Submitted on: 1/27/2024 3:47:30 PM
Testimony for EET on 1/30/2024 1:01:00 PM

Submitted By	Organization	Testifier Position	Testify
Christopher Dean	Testifying for Clean the Pacific, Recycle Hawaii	Support	Remotely Via Zoom

Comments:

Thank you Senators,

I can not begin to describe the level of joy that this bill brings me. Biomass using trees, plant matter or incineration of trash is NOT CO2 neutral. I remember twenty years ago, when the forest industry first proposed this as a carbon neutral alternative to fossil fuels. Their explanation sounded logical and many environmental groups endorsed it, only because we all knew that the climate crisis was dire. Unfortunately, no unbiased scientific studies had been done at that time to prove that burning wood was carbon neutral. Consequently, politicians embraced it with heavy lobbying from the forest industry and a tacit approval from some environmental groups.

Now the science has been done. Now we know with absolute certainty that biomass generation is NOT carbon neutral. In fact, studies now show that biomass is worse than burning coal. There are several factors that were not considered when the forest industry was pushing this form of energy generation. 1. After clear cutting a forest, that land becomes a carbon emitter. Most of the carbon is sequestered in the soil and once the trees are gone, that carbon is released. Even if the land is immediately replanted with trees, the land will continue to release more carbon than the trees capture for at least 20 years. That's because that's how long it takes to develop a full canopy for the trees. Leaves are the point of absorption for carbon, the more leaves, the more CO2 is captured. That's why only old growth forests are significant absorbers of carbon. The truth is, by the time the trees are just starting to absorb more carbon than they emit, it's time to cut them down again. That means that a biomass plant will never be carbon neutral. 2. Burning trees releases carbon stored in the trees. 3. The operation of equipment and trucks is energy intensive and emits carbon. 4. Turning the trees into pellets is energy intensive and emits carbon. 5. Replanting is energy intensive and emits CO2.

There are other factors to consider as well. Clear cutting forests leads to erosion. Constantly cutting and replanting trees never allows the soil to regenerate, causing a perpetual loss of soil nutrients. Operating heavy equipment and trucks on the forest floor caused soil compaction, making growth more and more difficult for plants. Constant heavy trucking traffic causes extreme wear and tear on public infrastructure. Maintaining and repairing that infrastructure is energy intensive and emits carbon as well as causing an increased tax burden. Operating the generation plant causes pollution. It pollutes fresh water from our aquifers. It causes air pollution. Particulates other toxic gases are created when burning wood. It causes noise pollution. There's noise from all the chainsaws, trucks, and heavy equipment, operating the

turbines, and making pellets around the clock every day of the year. It's all very loud and relentless. It causes light pollution. People don't think about that very often, but the astronomers do and I do and people who enjoy the starry skies do.

You know what form of energy doesn't create any of these problems and is the cheapest form of energy on the planet? Rooftop solar. Instead of building utility scale solar farms, incentivize home and commercial rooftop solar so no more of Hawaii's precious and dwindling natural habitat is destroyed. Home and commercial rooftop solar puts money back in the pockets of the community, instead of a few wealthy investors. Rooftop solar is the safest and most reliable form of energy in the world. Rooftop solar uses the least amount of natural resources. Rooftop solar doesn't pollute and is 99% recyclable over and over forever. China leads the world in Rooftop solar and we should too.

SB-2102
Submitted on: 1/26/2024 8:11:44 PM
Testimony for EET on 1/30/2024 1:01:00 PM

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

Comments:

SB2102 is an important correction to our RPS.

Burning Biomass is NOT SUSTAINABLE,

Burning Biomass is NOT CLEAN, It is well researched and documented - in addition to other toxics and emissions, burning biomass to produce electricity emits at least 50% MORE CO2 per KWH than burning coal!

Burning Biomass is NOT RENEWABLE. That greenwashed falsehood has been fully dispelled now viz science (agricultural biochem).

Transitioning to truly CLEAN renewable energy is of the utmost urgency. No less than our future survival is at stake. SB2102 will help correct and improve our RPS and thus also the choices that we as responsible adults make.

This legislation would not require the closure of any facilities, but would redefine the obligation so that HECO and KIUC must use cleaner sources to meet their obligation. Both utilities currently have enough renewable energy, without burning trash or trees, to meet their obligations until 2030.

I ask you to strongly support SB2102 and avoid legislative deal-making and manipulations that have had such a choke-hold on our progress.

Sincerely,

David J Hunt, Honoka'a, Hawaii

Below is a recent info sheet from Hawaii's Clean Power Task Force, As a help to you / in case you need additional background:

Burning Trash and Trees is not Clean Energy
Let’s Clean up Hawaii’s Renewable Energy Mandate

Hawai‘i has a state law called a Renewable Portfolio Standard (RPS) which requires that electric utilities provide 100% “renewable” energy by 2045 with goals along the way of 30% by 2020, 40% by 2030, and 70% by 2040. When people hear “renewable,” they think of clean sources like wind and solar, not polluting smokestacks from burning trash and trees. However, the state RPS law includes these burners, calling them “biomass.” Hawaiian Electric Company (HECO) serves O‘ahu, Hawai‘i and Maui Counties while the Kaua‘i Island Utility Cooperative (KIUC) serves Kaua‘i electric customers. A small portion of HECO and KIUC’s fuel mixes include “biomass,” which is dirty and unnecessary to meet the state’s renewable energy mandate.

Save the climate, burn a tree?

U.S. Environmental Protection Agency (EPA) data shows that burning trees emits 50% more carbon dioxide (CO_2) than burning coal, and that burning trash emits 65% more. While the last coal power plant in Hawai‘i closed in August 2022, trash burning continues on O‘ahu, and tree burning continues on Kaua‘i, emitting greenhouse gases far in excess of what would be released if burning coal or oil.

This flies in the face of the purpose of the RPS law and of Hawaii’s climate law and policies. Industry will argue that the excessive releases of CO_2 from burning trees does not count because trees regrow. However, this has been debunked by climate scientists for well over a decade. Claims of biomass carbon neutrality with regard to the proposed Hu Honua tree burner on Hawai‘i Island have been rejected by the Hawaii Public Utility Commission and the state Supreme Court. On Kaua‘i, where trees are being replanted, it takes 25 years for the trees to grow to maturity to cut and burn, yet the Mahipapa tree burner that opened in 2015 will likely close at the end of their contract in 2036, challenging carbon neutrality arguments. If climate were all that mattered, it would make more sense to burn coal and plant trees than to burn trees and plant trees. More wood must be burned to make the same amount of energy as coal, which is why wood burning releases 50% more CO_2 per unit of energy. Burning trash or trees also releases many other air pollutants that harm human health and the environment.

Taking out the trash

Trash burning is the most expensive and polluting way to manage waste or to make energy. It’s more harmful to burn trash and landfill toxic incinerator ash than to landfill waste directly. To make the same amount of energy as a coal power plant, trash incinerators in 2018 released 65% more carbon dioxide (CO_2), as much carbon monoxide, three times as much nitrogen oxides (NO_x), five times as much mercury, nearly six times as much lead and 27 times more hydrochloric acid (HCl). This is according to national EPA data where most trash incinerators have all four pollution control systems that incinerators tend to have. However, two of the three burners at the H-POWER trash incinerator on O‘ahu are missing half of the controls they should have, with no equipment to reduce the NO_x emissions that trigger asthma attacks,

and no carbon injection system to limit
emissions of toxic dioxins and mercury.

Why remove biomass from the RPS?

Disqualifying biomass will not close any existing facilities, but will speed up clean energy development by 2030.

How Would Making Biomass Ineligible Impact Utilities?

Hawaii's Renewable Portfolio Standard law mandates that 100% of the state's electricity come from renewable sources by 2045 according to the schedule represented by the blue line in the chart below. Currently, the burning of trash and trees ("biomass") qualifies as renewable under state law, which allows HECO to count
electricity from the H-POWER trash incinerator on Oʻahu (right) and allows KIUC to count the Green Energy (now "Mahipapa") tree burner on Kauaʻi toward their obligations, represented by the orange and grey lines.

The yellow and brown lines represent their compliance without using biomass.

This legislation would not require the closure of any facilities, but would redefine the obligation so that HECO and KIUC must use cleaner sources to meet their obligation. Both utilities currently have enough renewable energy, without burning trash or trees, to meet their obligations until 2030.

2023 data will show that HECO would comply even without counting H-POWER, thanks to a full year of production from the Mililani I and Waiawa solar projects that started in mid/late 2022, plus commercial operations of additional grid-scale solar and battery energy storage projects, increases in private rooftop solar projects, and the return of Puna Geothermal Ventures to full service. KIUC is set to easily meet their obligation until 2040 and plans to be 100% renewable by 2033. Since KIUC's contract to buy power from the Mahipapa tree burner expires in 2036 (at which point, the plant will likely close because solar with energy storage is already a more affordable option for KIUC), KIUC will likely be ready to meet the 100% requirement by 2036
without biomass, nine years before the state goal. The bill, therefore, has no meaningful impact on KIUC.

What impact will the bill have? HECO already has to develop more wind and solar energy to meet their 2040 obligation. Passage of this bill will speed that up by not allowing HECO to rely on H-POWER, or any <u>new</u> biomass or waste incinerators (like the Hu Honua biomass burner proposed on Hawaiʻi Island) to meet their
2030 obligation, requiring that they add more clean energy capacity prior to the state's 2030 target that requires 40% of their energy to be from renewable sources. Since wind and solar are cheaper than oil or trash burning, the bill would not increase the cost to ratepayers

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SB-2102
Submitted on: 1/27/2024 7:28:04 AM
Testimony for EET on 1/30/2024 1:01:00 PM

Submitted By	Organization	Testifier Position	Testify
Annette Barr	Individual	Support	Written Testimony Only

Comments:

I support removing biomass as a source of renewable energy for Hawaii. Biomass creates hazards to our environment including our air and water and should not ever be considered a clean source of energy.

SB-2102
Submitted on: 1/27/2024 9:48:17 AM
Testimony for EET on 1/30/2024 1:01:00 PM

Submitted By	Organization	Testifier Position	Testify
Barbara Hershey	Individual	Support	Written Testimony Only

Comments:

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Burning Biomass is NOT CLEAN, It is well researched and documented - in addition to other toxics and emissions, burning biomass to produce electricity emits at least 50% MORE CO2 per KWH than burning coal!

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This legislation would not require the closure of any facilities, but would redefine the obligation so that HECO and KIUC must use cleaner sources to meet their obligation. Both utilities currently have enough renewable energy, without burning trash or trees, to meet their obligations until 2030.

I ask you to strongly support SB2102 and avoid legislative deal-making and manipulations that have had such a choke-hold on our progress.
Thank you!

SB-2102
Submitted on: 1/27/2024 10:13:44 AM
Testimony for EET on 1/30/2024 1:01:00 PM

Submitted By	Organization	Testifier Position	Testify
Mary True	Individual	Support	Written Testimony Only

Comments:

Aloha, I oppose listing biomass as renewable. This is cave man technology and is not cost effective for the consumer or good for the environment since it is one of the dirtiest sources of power known to man.

Mahalo for your attention, Mary True, Pepeekeo

SB-2102
Submitted on: 1/27/2024 10:57:21 AM
Testimony for EET on 1/30/2024 1:01:00 PM

Submitted By	Organization	Testifier Position	Testify
Sylvia Spalding	Individual	Support	Written Testimony Only

Comments:

I have resided in Hawai since 1969 and also manage an ancestral family farm on my father's side located in Iowa. Becaue of the latter, I have been educated on the negative impacts of use of biomass for energy. Iowa is the nation's major corn producer, but the majority of that goes for ethanol. This is a government subsidized program that creates an enormous amount of green house gases. The fossil fuel / ethanol industry (through government use of taxpayers' money) is now trying to use eminent domain over farmlands, forests and rivers in order to store that CO2 underground. This method of storage has not proved to be a sustainable longterm, environmental solution for the problem of creating green house gases through the burning of biomass. The solution is to not utilize biomass for fuel in the first place and support natural sequestration of CO2 through support of forests, grasslands and other perennial vegetation, especially those that are deep rooted.

Please consider the points below and support SB2101.

- Twenty years ago, the Hawaii legislature established the State's renewable portfolio standards model to ensure that Hawaii's electric utility companies transition from using fossil fuels to renewable energy. At that time, it was thought that burning biomass was "carbon neurtral." However, we've learned since then that there is nothing carbon neutral about burning biomass. Burning biomass is disasterous for the stability of our climate system. We need to update the renewable portfolio standard with scientifically sound choices. Action taken now to reduce these emissions will affect the livability of the planet for generations.

- Burning trees is fifty per cent worse for the climate than burning coal. Waste incineration is the most expensive and polluting way to manage waste or to make energy. To reduce both electricity rates and greenhouse gasses, we should stop biomass incineration by eliminating biomass from the renewable portfolio standard.

- Emissions from burning biomass for energy are a critical concern. This bill would address a flaw in the renewable portfolio standard (RPS) definition and remove biomass from the RPS definition of renewable energy. Burning biomass is not only expensive, it is a very dirty source of energy production and is actually worse than burning coal or other fossil fuels. This bill helps ensure proper consideration of the environmental effects of biomass burning for energy.

SB-2102
Submitted on: 1/27/2024 11:42:35 AM
Testimony for EET on 1/30/2024 1:01:00 PM

Submitted By	Organization	Testifier Position	Testify
Sunny Savage	Individual	Support	Written Testimony Only

Comments:

in support

SB-2102
Submitted on: 1/27/2024 12:07:08 PM
Testimony for EET on 1/30/2024 1:01:00 PM

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

Comments:

Twenty years ago, the legislature established the State's renewable portfolio standards model to ensure that Hawaii's electric utility companies transition from using fossil fuels to renewable energy. At that time, it was thought that burning biomass was "carbon neurtral." However, we've learned since then that there is nothing carbon neutral about burning biomass. Burning biomass is disasterous for the stability of our climate system. We need to update the renewable portfolio standard with scientifically sound choices. Action taken now to reduce these emissions will affect the livability of the planet for generations.

- Burning trees is fifty per cent worse for the climate than burning coal. Waste incineration is the most expensive and polluting way to manage waste or to make energy. To reduce both electricity rates and greenhouse gasses, we should stop biomass incineration by eliminating biomass from the renewable portfolio standard.

- Emissions from burning biomass for energy are a critical concern. This bill would address a flaw in the renewable portfolio standard (RPS) definition and remove biomass from the RPS definition of renewable energy. Burning biomass is not only expensive, it is a very dirty source of energy production and is actually worse than burning coal or other fossil fuels. This bill helps ensure proper consideration of the environmental effects of biomass burning for energy.

SB-2102
Submitted on: 1/27/2024 4:54:44 PM
Testimony for EET on 1/30/2024 1:01:00 PM

Submitted By	Organization	Testifier Position	Testify
Judith A Mick	Individual	Support	Written Testimony Only

Comments:

Strongly support this bill

SB-2102
Submitted on: 1/27/2024 6:53:23 PM
Testimony for EET on 1/30/2024 1:01:00 PM

Submitted By	Organization	Testifier Position	Testify
L. Osterer	Individual	Support	Written Testimony Only

Comments:

Strongly support this bill. Burning trees takes 2 tolls, removing the trees positive affect on air quality and producing more polluting carbons. In combination with waste incineration, it is the most expensive and polluting way to make energy. To reduce greenhouse gasses, we should stop biomass incentives and eliminate biomass from the renewable portfolio standard.

This bill would address a needed change in the renewable portfolio standard (RPS) definition, removing biomass as a renewable energy. The legislation 20 years ago included biomass burning as an alternative to fossil fuels, but current scientific data shows that it is not a viable alternative because of the effect on climate change critial to our environment.

Now is not the time to promote technologies that increase greenhouse gases on the basis that they are not derived from fossil fuels. We must reduce greenhouse gas emissions as soon as possible to avoid an irreversible world-wide temperature rise, already approaching a critical tipping point. Currently, the rainforsts cannot sustain the replenishment of fresh water consumed. Fires and draughts accelerate climate warming and lack of sustainability. Adding biomass just tips the scale further towards unsustainability.

Thank you for your consideration,

L. Osterer, long-term resident and registered voter

SB-2102
Submitted on: 1/27/2024 7:24:21 PM
Testimony for EET on 1/30/2024 1:01:00 PM

Submitted By	Organization	Testifier Position	Testify
Koohan Paik-Mander	Individual	Support	Written Testimony Only

Comments:

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Burning Biomass is NOT RENEWABLE. That greenwashed falsehood has been fully dispelled now via science (agricultural biochem).

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This legislation would not require the closure of any facilities, but would redefine the obligation so that HECO and KIUC must use cleaner sources to meet their obligation. Both utilities currently have enough renewable energy, without burning trash or trees, to meet their obligations until 2030.

I ask you to strongly support SB2102 and avoid legislative deal-making and manipulations that have had such a choke-hold on our progress.

Thank you for your service,

Koohan Paik-Mander, Honoka'a, Hawaii

SB-2102
Submitted on: 1/28/2024 9:17:55 AM
Testimony for EET on 1/30/2024 1:01:00 PM

Submitted By	Organization	Testifier Position	Testify
Maki Morinoue	Individual	Support	Written Testimony Only

Comments:

Aloha

I strongly support SB2102!

Last session I witnessed how the term biomass created a *dangerous greenwashing effect*. Burning trees for energy is disastrous for the climate. The reasonings don't require complex critical thinking skills to defend this further when we globally and scientifically see mass forests destroyed by fires and when we recognize that the Amazon forests and phytoplanktons provide us with oxygen in EVERY breath we take.

Eliminating biomass from the renewable portfolio standard definition of "renewable energy" is a VERY important step to keep our laws void of burning trees. We have to do everything we can to protect our forests and encourage growth, and we must quickly remove toxic land impacts on our oceans.

Mahalo
Maki Morinoue
Hōlualoa
96725

SB-2102
Submitted on: 1/28/2024 11:36:40 AM
Testimony for EET on 1/30/2024 1:01:00 PM

Submitted By	Organization	Testifier Position	Testify
Melissa Barker	Individual	Support	Written Testimony Only

Comments:

Honorable Senators,

I respectfully ask that you support SB2102 which eliminates biomass from the renewable portoflio standard of "renewable energy".

Burning trees 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 which we no longer have. Waste incineration is the most expensive and polluting way to manage waste or to make energy. We are in a climate crisis and must make scientifically sound choices that will reduce greenhouse gas emissions as soon as possible if we hope to not exceed a 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.

Thank you for your attention and consideration.

Melissa Barker

Kapaa, HI

SB-2102
Submitted on: 1/28/2024 12:35:43 PM
Testimony for EET on 1/30/2024 1:01:00 PM

Submitted By	Organization	Testifier Position	Testify
Audrey Enseki-Tom	Individual	Support	Written Testimony Only

Comments:

I strongly support SB2102.

SB-2102
Submitted on: 1/28/2024 12:50:13 PM
Testimony for EET on 1/30/2024 1:01:00 PM

Submitted By	Organization	Testifier Position	Testify
Georgia L Hoopes	Individual	Support	Written Testimony Only

Comments:

Strong Support

The State's renewable portfolio standards model needs to be updated to reflect the science that proves how polluting it is to burn biomass.

SB-2102
Submitted on: 1/28/2024 12:56:15 PM
Testimony for EET on 1/30/2024 1:01:00 PM

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

Comments:

Aloha Chair DeCoite, Chair Gabbard, and members of the EET and AEN committees,

I’m testifying in strong support of SB 2102 because burning of rubbish and trees are toxic and polluting to air, land, and water. These 'Biomass' sources must be struck from the State's renewable portfolio standard definition. The burning of 'Biomass' is not "carbon neutral".

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

Mahalo

Keith Neal

SB-2102
Submitted on: 1/28/2024 2:32:33 PM
Testimony for EET on 1/30/2024 1:01:00 PM

Submitted By	Organization	Testifier Position	Testify
David Ball	Individual	Support	Written Testimony Only

Comments:

Burning trees is a destructive way to meet our renewable energy needs. Please close this loophole and place our community's needs over special interests.

David Ball

Waialae-Kahala

SB-2102
Submitted on: 1/28/2024 2:49:24 PM
Testimony for EET on 1/30/2024 1:01:00 PM

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

Comments:

Aloha,

Hawaii Nei needs more trees. Biomass burning is NOT the answer for out energy needs.

JN Makawao

SB-2102
Submitted on: 1/28/2024 2:56:34 PM
Testimony for EET on 1/30/2024 1:01:00 PM

Submitted By	Organization	Testifier Position	Testify
Jeanette Burdick	Individual	Support	Written Testimony Only

Comments:

Chairman Gabbard and fellow committee, mahalo for the opportunity to speak on bill HB2102.

I am in support of this bill because it is critical in the effort of discerning from greenwashing conepts and practices. It will also reduce the cost of electricity by leaning on renewable nergy sources more, and lessen Hawai'i;s reliability on imports for our energy production. Waste incineration, when burning plastics and trash that is comprised of fossil fuels, is not renewable despite the flow of resources for the incinerator may be looked at as such. It is imperative this bill be passed in order to achieve the Aloha+Challenge, which will be wrapping up in 2030, a quick 6 years away. Passing this bill can highlight the need for alternative avenues of waste diversion, ones that divery, reuse, and upcycle the "waste" for energy generation (through capturing of methane of biogas) and fertilizer creation.

Mahalo for your time and the opportunity to testify.

Jeanette Burdick

SB-2102
Submitted on: 1/28/2024 4:12:43 PM
Testimony for EET on 1/30/2024 1:01:00 PM

Submitted By	Organization	Testifier Position	Testify
Carol Hemington	Individual	Support	Written Testimony Only

Comments:

Burning trees 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 which we no longer have. Waste incineration is the most expensive and polluting way to manage waste or to make energy. This bill would address a flaw in the renewable portfolio standard (RPS) definition and remove biomass from the RPS definition of renewable energy. Burning biomass is not only expensive, it is a very dirty source of energy production and is actually worse than burning coal or other fossil fuels. This bill helps ensure proper consideration of the environmental effects of biomass burning for energy.

SB-2102
Submitted on: 1/28/2024 9:04:49 PM
Testimony for EET on 1/30/2024 1:01:00 PM

Submitted By	Organization	Testifier Position	Testify
Ruta Jordans	Individual	Support	Written Testimony Only

Comments:

SB2102 has to do with burning biomass (trees). It is basically to stop the burning of trees and calling it 'green'. More particulates go into the atmosphere from burning trees than from a coal burning facility. At one point burning was promoted by our state as green and given all of the benefits and incentives as solar, wind, or viable alternatives. This Bill is reversing that mistake.

SB-2102
Submitted on: 1/28/2024 9:48:18 PM
Testimony for EET on 1/30/2024 1:01:00 PM

Submitted By	Organization	Testifier Position	Testify
Cory Harden	Individual	Support	Written Testimony Only

Comments:

Aloha legislators,
Please support this bill so biomass will no longer be considered "renewable" energy. We now know that burning trees is far worse than burning coal, and that burning waste is costly and generates pollution.
mahalo,
Cory Harden

SB-2102
Submitted on: 1/28/2024 10:31:42 PM
Testimony for EET on 1/30/2024 1:01:00 PM

Submitted By	Organization	Testifier Position	Testify
Ronald "Ron" Reilly	Individual	Support	Written Testimony Only

Comments:

Dear Chairs DeCoite and Gabbard, Vice Chairs Wakai and Richards, and members of the Energy,
Economic Development and Tourism and Agriculture and Environment Committees,

Thank you for hearing SB2102 relating to Relating To Renewable Energy. Many thanks also to the introducers of this measure which eliminates biomass from the renewable portfolio standard definition of "renewable energy".

The myth of “burning trees as a carbon neutral renewable resource” has been widely debunked. The burning of trees, the burning of fossil trees (coal, oil, and natural gas), and the burning of garbage all contribute to our collective greenhouse gas emissions.

Claims that replanting of trees will balance the carbon equation in the long term are tenuous and unenforceable. Large land owners have already indicated they plan to put their land to better agricultural uses than further planting of exotic trees.

I respectfully urge your support of this measure.

Sincerely, Ron Reilly
Volcano Village, Hawaii

SB-2102
Submitted on: 1/29/2024 6:49:56 AM
Testimony for EET on 1/30/2024 1:01:00 PM

Submitted By	Organization	Testifier Position	Testify
Emily Garland	Individual	Support	Written Testimony Only

Comments:

SB2102 is an important correction to our RPS.

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This legislation would not require the closure of any facilities, but would redefine the obligation so that HECO and KIUC must use cleaner sources to meet their obligation. Both utilities currently have enough renewable energy, without burning trash or trees, to meet their obligations until 2030.

I ask you to strongly support SB2102 and avoid legislative deal-making and manipulations that have had such a choke-hold on our progress.

Mahalo nui loa,

Emily

SB-2102
Submitted on: 1/29/2024 7:23:27 AM
Testimony for EET on 1/30/2024 1:01:00 PM

Submitted By	Organization	Testifier Position	Testify
Virginia Tincher	Individual	Support	Written Testimony Only

Comments:

Mahalo for this opportunity to testify in strong support of SB2102

- Twenty years ago, the legislature established the State's renewable portfolio standards model to ensure that Hawaii's electric utility companies transition from using fossil fuels to renewable energy. At that time, it was thought that burning biomass was "carbon neurtral." However, we've learned since then that there is nothing carbon neutral about burning biomass. Burning biomass is disasterous for the stability of our climate system. We need to update the renewable portfolio standard with scientifically sound choices. Action taken now to reduce these emissions will affect the livability of the planet for generations.

- Burning trees is fifty per cent worse for the climate than burning coal. Waste incineration is the most expensive and polluting way to manage waste or to make energy. To reduce both electricity rates and greenhouse gasses, we should stop biomass incineration by eliminating biomass from the renewable portfolio standard.

- Emissions from burning biomass for energy are a critical concern. This bill would address a flaw in the renewable portfolio standard (RPS) definition and remove biomass from the RPS definition of renewable energy. Burning biomass is not only expensive, it is a very dirty source of energy production and is actually worse than burning coal or other fossil fuels. This bill helps ensure proper consideration of the environmental effects of biomass burning for energy.

Virginia

SB-2102
Submitted on: 1/28/2024 5:43:02 PM
Testimony for EET on 1/30/2024 1:01:00 PM

Submitted By	Organization	Testifier Position	Testify
Alyce Dodge	Individual	Comments	Written Testimony Only

Comments:

Aloha,

I strongly support **SB2102** **Eliminates biomass from the renewable portfolio standard definition of "renewable energy"** and companion bill **HB 2786.**

The goal of having a renewable sources of energy is to reduce greenhouse gas emissions and provide "clean" energy in a cost effective way. Burning biomass such as trees is not only expensive, it is a very dirty source of energy production. This kind of incineration is an expensive method to manage waste and to make energy, and results in high levels of pollution.

Mahalo,

Alyce Dodge

SB-2102
Submitted on: 1/27/2024 9:32:13 PM
Testimony for EET on 1/30/2024 1:01:00 PM

Submitted By	Organization	Testifier Position	Testify
R A Culbertson	Testifying for Big Island Forest Stewards member	Support	Written Testimony Only

Comments:

Aloha Senators!

I and many in our Big island community working in forest restoration and climate mitigation have long been opposed to the misguided notions surrounding 'biomass' as potential fuel stock, and classified by some as "renewable". Nothing could be farther from the truth!

So now is the time correct such misguided notions corrected. And this bill does it!

Burning Biomass is NOT CLEAN, nor is it a 'solution' to otherwise landfilling 'greenwastes'. It is now well established that were it to be burned for 'fuel' to make electricity, burning biomass would emit at least 50% MORE CO2 per KWH than burning coal!

Transitioning to truly CLEAN renewable energy is of the utmost urgency. SB2102 will help correct and improve our Renewable Portfolio Standards.

I urge you to strongly support SB2102 and get on the right side of current science...and history!

SB-2102
Submitted on: 1/28/2024 1:45:26 PM
Testimony for EET on 1/30/2024 1:01:00 PM

Submitted By	Organization	Testifier Position	Testify
robert brower	Testifying for Surfrider Foundation Kauai chapter	Support	Written Testimony Only

Comments:

strong support

SB-2102
Submitted on: 1/29/2024 10:40:25 AM
Testimony for EET on 1/30/2024 1:01:00 PM

Submitted By	Organization	Testifier Position	Testify
Nanea Lo	Individual	Support	Written Testimony Only

Comments:

Hello,

My name is Nanea Lo. I'm born and raised in the Hawaiian Kingdom. I live in Mōʻiliʻili. I'm writing in STRONG SUPPORT of SB2102.

- Twenty years ago, the legislature established the State's renewable portfolio standards model to ensure that Hawaii's electric utility companies transition from using fossil fuels to renewable energy. At that time, it was thought that burning biomass was "carbon neurtral." However, we've learned since then that there is nothing carbon neutral about burning biomass. Burning biomass is disasterous for the stability of our climate system. We need to update the renewable portfolio standard with scientifically sound choices. Action taken now to reduce these emissions will affect the livability of the planet for generations.

- Burning trees is fifty per cent worse for the climate than burning coal. Waste incineration is the most expensive and polluting way to manage waste or to make energy. To reduce both electricity rates and greenhouse gasses, we should stop biomass incineration by eliminating biomass from the renewable portfolio standard.

- Emissions from burning biomass for energy are a critical concern. This bill would address a flaw in the renewable portfolio standard (RPS) definition and remove biomass from the RPS definition of renewable energy. Burning biomass is not only expensive, it is a very dirty source of energy production and is actually worse than burning coal or other fossil fuels. This bill helps ensure proper consideration of the environmental effects of biomass burning for energy.

me ke aloha ʻāina,

Nanea Lo

SB-2102
Submitted on: 1/29/2024 2:05:20 PM
Testimony for EET on 1/30/2024 1:01:00 PM

Submitted By	Organization	Testifier Position	Testify
fred hofer	Individual	Support	Written Testimony Only

Comments:

Biomass burning is neither sustainable, nor clean, nor renewable.

Mahalo

Fred Hofer, Hilo

SB-2102
Submitted on: 1/29/2024 11:26:09 PM
Testimony for EET on 1/30/2024 1:01:00 PM

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

Comments:

Aloha esteemed legislators and decision makers,

Please SUPPORT SB2102, Don‘t give "Renewable Energy" a bad name. Let‘s not burn trash or trees and try to call it "Green," the burning economy is burning our world and leaving us inhaling the ashes, but there‘s no reason to anymore. There are orders of magnitude cleaner, more community friendly, and economical sources of Renewable Energy from wind, sun, waves, etc that deserve public support and don‘t actually run out so that we have to chop down other forests or import other peoples trash, at even higher carbon costs. We don‘t want accounting or PR tricks, theres real solutions with much more integrity and savings for everyone involved in a transition to CLEAN RENEWABLES that really keep giving, not just energy but the financial freedom and freedom from worry that knowing the sun will always be there, the wind will keep blowing, the waves will keep moving. Don‘t try cheap greenwashed psuedo fixes that cost more in the long run locking the public into higher costs for years to come, do it right the first time and save everyone‘s pocketbooks, as well as the environment we all enjoy. Everbody is moving away from so many practices we thought acceptable in the past and learning the throw away cheap consumer culture is so much more expensive in so many ways, from our health to our hearts to our futures, it‘s just not worth it, get something that lasts for the public. Thank you and know we support your leadership in doing things right.

Mahalo nui loa for your time,

Phaethon Keeney

Honokaa Hawaii

Senate Committee on Energy, Economic Development, and Tourism
Senate Committee on Agriculture and Environment
Hearing on Jan. 30, 2024 at 1:01 pm

SUPPORTING SB 2102

Aloha, my name is John Kawamoto, and I support SB 2102.

The Hawaii Legislature had the foresight in 2001 to pass the renewable portfolio standards law, which is designed to transition electric utilities to clean, renewable energy. Subsequently, in 2018, the Legislature adopted a statewide goal of net-negative emissions to be achieved by 2045. The RPS law should be brought into alignment with Hawaii's net-negative emissions goal.

When the RPS law was passed in 2001 it was generally assumed that all renewable energy was clean. Since then, science has advanced, and we have learned, for example, that some renewable energy – like solar -- is clean, and other renewable energy – like biomass – is dirty.

When biomass is burned to create energy, it emits greenhouse gases and other pollutants. Trees are a form of biomass that are commonly burned to create electricity, and when trees are burned, the carbon sequestered by the trees is released into the atmosphere as carbon dioxide, where it warms the Earth. According to NASA, when carbon dioxide is released into the atmosphere, it stays there for 300 to 1,000 years. The burning of trees and other biomass has harmful long-term effects.

It is true that the trees can be regrown. But it takes decades for new trees to mature so they can sequester the carbon released when the original trees were burned. Humanity doesn't have that much time. Climate scientists say that humans must take drastic action to reduce emissions by 2030 to avoid a global climate catastrophe.

Biomass should be removed from the sources that are allowed to be used by electric utilities to satisfy their RPS requirements. If not, those utilities will be allowed to burn biomass in 2045, when Hawaii's goal is net negative emissions.

I urge the joint committee to pass SB 2102 to bring the RPS law into alignment with Hawaii's net-negative emissions goal. A complete transition to a clean, renewable energy future is critical to maintaining a livable planet for future generations.

SB-2102
Submitted on: 1/29/2024 5:35:26 PM
Testimony for EET on 1/30/2024 1:01:00 PM

Submitted By	Organization	Testifier Position	Testify
Jim Scancella	Individual	Support	Written Testimony Only

Comments:

I am in support of this bill. For many good reasons. Please let it pass.

Jim

Statement of
Brigadier General Stanley J. Osserman Jr. (USAF Ret.), President
Tigershark, LLC
Before the
House Committee on Energy, Economic Development and Tourism
30 January 2024
1:01 pm
State Capitol Conference Room #229
In consideration of
SB2102
Relating to Renewable Energy

Chair DeCoite 26 January 2024

Vice Chair Wakai and Distinguished Committee Members:

I stand in strong opposition to this bill.

As the former director of the Hawaii Center for Advanced Transportation Technologies (HCATT; 2013 to 2019), Hawaii Department of Business, Economic Development and Tourism (DBEDT), I continue to serve our state by promoting clean, renewable energy solutions. This testimony is NOT being given for compensation of any kind by any corporate or commercial entity. I am presenting to you today as a concerned "Life-Long" citizen of the State of Hawaii with extensive professional experience in energy systems, retail and wholesale business, military matters, international commerce, aviation, construction, maritime operations, and public safety, among others. My goal is to help our government leaders make good strategic choices.

When the State of Hawaii drafted the Renewable Portfolio Standards (RPS), I was constructing a 10 ton per day Waste to energy plant for the USAF Research Laboratory at Joint Base Peral Harbor-Hickam. I feel that the language describing the cost to benefit of waste to energy plants in general, in this bill is solid, however eliminating the "Biomass" category presents several major problems for the State and particularly for the County of Hawaii.

After publication of the RPS a company, Ho Honua (I think it's now called Honua Ola) proposed a Biomass plant that would, among other things: Utilize the thousands of acres of "crop" grown eucalyptus trees that replaced sugar cane, proposed dozens of jobs for a community that needed them badly, offered a significant amount of "FIRM" renewable Power to HELCO and provided some cattle feed for ranchers and biochar for farmers on our island with the majority of our state's ranches and farms. The company was approved twice by the Hawaii PUC to sell power from its plant to HELCO. Then it was challenged in court, and after several

years of litigation, the State Supreme Court agreed with the challenge, and the PUC reversed the approval. During that time, the investor put $500 million of infrastructure in place and hired dozens of employees. They have, as I understand, kept those employees in paid service for the duration of litigation and beyond. I understand that they are planning to appeal the PUC and court's decision, keeping their employees on the payroll and taking losses for many years.

As an employee at DBEDT I had to question, "Why is Hawaii ALWAYS at the end of the list of business-friendly states?" This bill is an example of why! The State RPS was the invitation. Many people supported the proposed project, and for good reason, so a company invested half a billion dollars to make it happen. They hired contractors and got permits. They had a solution for a community and a public utility, and they acted in good faith. By making this bill law we have proved, once again that Hawaii is not the place for serious investors trying to help Hawaii.

So we will add Honua Ola to the TMT, the Super Ferry and many others to the long, long list of other broken promises made to investors with honorable intentions in an efforts to meet our goals.

The eucalyptus trees were planted as a crop. The original market for the crop was high-end paper. That market went away. The next customer was to build furniture. But that nation is having it's own economic issues, so what will we do with thousands of acres of 100 foot-plus trees that are not particularly good at taking in CO2 and giving us O2. Those trees don't have many lateral branches, thus fewer knots to take away from the structural qualities. They also have oils that help repel insects (but also add to flammability when wildfire hits). We need lumber here. We need affordable housing. Todays cargo ships that no longer burn "bunker fuel", but burn diesel. Besides having a huge carbon footprint, they needlessly drive up the cost of the diesel that our farmers and truckers a commercial fishermen need for their equipment. We now own the cost of managing thousands of acres of trees, so they don't contribute to fires and fall on public and private roads, property or power lines. We should be milling those trees into lumber for homes and reducing the carbon footprint from container ships importing lumber.

Economics will select the right types of power. Waste to energy solutions do not have a great return on investment so it won't be the choice unless it can do other things. Enacting this particular law breaks a promise made by the State years ago and makes Hawaii look like a fickle amateur, that only sets up big investors for failure at the whim of a small vocal, uneducated group. Business financers will weed out the companies that don't cut the ROI mustard. Passing this bill will kill any chance that Honua Ola has on their last try with the PUC. Let them make their case, and think about someone with a plan for all those trees that makes more sense!

Brigadier General, Stanley J. Osserman Jr. (USAF Ret.)

President, Tigershark, LLC

SB-2102
Submitted on: 1/28/2024 8:40:37 PM
Testimony for EET on 1/30/2024 1:01:00 PM

Submitted By	Organization	Testifier Position	Testify
Glen Kagamida	Individual	Oppose	Written Testimony Only

Comments:

Seriously?! After the recent series of rolling blackouts you want to make us more vulnerable?

We need more sources of energy, not less!

11 cents a KWH means nothing if its not available when the sun doesn't shine and the wind doesn't blow. A million batteries that can't recharge are a million dead batteries.

OPPOSE!!!

January 29, 2024
SB2102

COMMITTEE ON ENERGY, ECONOMIC DEVELOPMENT & TOURISM
Sen. Lynn DeCoite, Chair; Sen. Glenn Wakai, Vice Chair; and Committee Members

COMMITTEE ON AGRICULTURE AND ENVIRONMENT
Sen. Mike Gabbard, Chair; Sen. Herbert Richards III, Vice Chair; and Committee Members

Public Hearing, January 30, 2024 at 1:00 p.m., Conference Room 229

TESTIMONY of PAUL SHINKAWA OF BANA PACIFIC LLC AND SUMA FARMS LLC IN OPPOSITION of SB 2102

My name is Paul Shinkawa, manager of Bana Pacific LLC and Suma Farms LLC.
We oppose SB 2102 which proposes to eliminate the use of various biomass energy sources from Hawaii's renewable portfolio.
The use of biofuel sources helps in the responsible development of a Hawaii Green Fuels initiative coupled with elements that may enhance our agricultural, energy and transportation sectors in Hawaii.

Our circumstances necessitate that renewable energy programs be accelerated, with biofuels options serving to be a primary solution to address these energy requirements. Biofuels are an excellent option with their high efficiency providing the reliable and consistent firming of Hawaii's power grid, as they are supplemented by intermittent energy sources such as PV systems and wind turbine generators.
Collectively these renewable energy sources will ensure we meet our RPS mandates.

Thank you for this opportunity to submit our opposition to SB 2102.

Thank you & Aloha,
Paul Shinkawa

SB-2102
Submitted on: 1/29/2024 7:15:17 AM
Testimony for EET on 1/30/2024 1:01:00 PM

Submitted By	Organization	Testifier Position	Testify
Alika Maikui	Individual	Oppose	Written Testimony Only

Comments:

Biomass is created by any type of crop or agricultural plant. Eliminating biomass is eliminating any organic plant that benefits us in making renewable energy.

SB-2102
Submitted on: 1/29/2024 7:27:57 AM
Testimony for EET on 1/30/2024 1:01:00 PM

Submitted By	Organization	Testifier Position	Testify
aulani hood	Individual	Oppose	Written Testimony Only

Comments:

I oppose this bill. Mahalo!

SB-2102
Submitted on: 1/29/2024 7:31:10 AM
Testimony for EET on 1/30/2024 1:01:00 PM

Submitted By	Organization	Testifier Position	Testify
Beatrice Cabral	Individual	Oppose	Written Testimony Only

Comments:

I oppose this bill, we need all options of renewable resouces out there.

SB-2102
Submitted on: 1/29/2024 7:32:44 AM
Testimony for EET on 1/30/2024 1:01:00 PM

Submitted By	Organization	Testifier Position	Testify
Georgette Nacis	Individual	Oppose	Written Testimony Only

Comments:

I oppose this bill.

SB-2102
Submitted on: 1/29/2024 7:33:25 AM
Testimony for EET on 1/30/2024 1:01:00 PM

Submitted By	Organization	Testifier Position	Testify
aulii fernandez	Individual	Oppose	Written Testimony Only

Comments:

Eliminating biomass will eliminate hundreds of agricultural jobs necessary to grow the biomass crops.

SB-2102
Submitted on: 1/29/2024 7:34:23 AM
Testimony for EET on 1/30/2024 1:01:00 PM

Submitted By	Organization	Testifier Position	Testify
micah hood	Individual	Oppose	Written Testimony Only

Comments:

Eliminating biomass from Hawaii's renewable energy future is going to shut down thousands of future construction jobs and long-term jobs to operate firm renewable power plants run on biomass, which is a crop that makes biofuels.

SB-2102
Submitted on: 1/29/2024 7:39:23 AM
Testimony for EET on 1/30/2024 1:01:00 PM

Submitted By	Organization	Testifier Position	Testify
Sophia Cabral-Maikui	Individual	Oppose	Written Testimony Only

Comments:

Aloha,

I opposed SB2102.

The cost of energy in Hawaii has gone up so much since the political events in the middle east affects the cost of oil. Having a locally grown energy source like biomass crops can help to stabilize and lower our cost of energy. We should not eliminate this option.

Mahalo!

SB-2102
Submitted on: 1/29/2024 7:57:35 AM
Testimony for EET on 1/30/2024 1:01:00 PM

Submitted By	Organization	Testifier Position	Testify
Elmer	Individual	Oppose	Written Testimony Only

Comments:

Aloha,

My Name is Elmer Gorospe. I writing this in opposition of SB2102. This Bill will not only make it harder to get to 100% renewable, it will also displace workers with good paying jobs.

SB-2102
Submitted on: 1/29/2024 8:23:54 AM
Testimony for EET on 1/30/2024 1:01:00 PM

Submitted By	Organization	Testifier Position	Testify
Roselyn Molina	Individual	Oppose	Written Testimony Only

Comments:

I, Roselyn Molina strongly oppose this bill SB2102 because it would make it harder to reach 100% renewable energy, and it will eliminate good paying jobs.

SB-2102
Submitted on: 1/29/2024 8:26:27 AM
Testimony for EET on 1/30/2024 1:01:00 PM

Submitted By	Organization	Testifier Position	Testify
Jennifer Yadao	Individual	Oppose	Written Testimony Only

Comments:

I Jennifer Yadao, strongly oppose this bill because it will make it diffcult for the State of Hawaii to reach 100% renewable energy and it will eliminate current and future good paying jobs.

SB-2102
Submitted on: 1/29/2024 8:50:49 AM
Testimony for EET on 1/30/2024 1:01:00 PM

Submitted By	Organization	Testifier Position	Testify
Raymond Grillot	Individual	Oppose	Written Testimony Only

Comments:

I would like to oppose SB 2102. i feel that the State of Hawaii needs biofuel as a dependable renewable source of firm power that is not tied to imported oil or coal. The Big Island's Honua Ola Bioenergy power plant is a perfect example of clean renewable energy that is so much needed. As we witnessed on Oahu a few weeks ago, HECO went through many days of rolling blackouts which were caused by gusty winds that were so high the wind turbines "auto derated' causing them to shutdown, and since the entire state had overcast clouds, the solar penetration was almost non-existent, coupled with units off line at Waiau Generating Station. Right now as I'm writhing this, the Puna CT3 unit on the Big Island is operating on a 24 hour schedule, and burning diesel fuel, which is very expensive, and ratepayers are footing the bill.

SB-2102
Submitted on: 1/29/2024 9:23:12 AM
Testimony for EET on 1/30/2024 1:01:00 PM

Submitted By	Organization	Testifier Position	Testify
peter simmons	Individual	Oppose	Written Testimony Only

Comments:

Senator Gabbard and other Senators,

RE: Senate Bill 2102

Aloha Senator and Other Committee Members,

My name is Peter Simmons; I am a professional Land Manger who retired from Kamehameha Schools. I write in adamant opposition to Senate Bill 2102 is misguided and will if passed into law block our State from creatively and efficiently using one of its most abundant undervalued assets – wood waste and woody weeds.

1. trees and wood decay they emit undesirable gasses such as carbon dioxide and methane. This fact is well beyond arguable. We must manage the resource efficiently while using it creatively in a manner that benefits the land, its resources and people.

Utilizing weed trees and wood waste in our modern processing facilities involves burning them in sophisticated facilities to create electricity that can be further used to fuel our power needs while employing mechanisms to greatly reduce the negative effects of biological decay. When you consider that according to recent studies by the United States Forest Service, over ¼ of our State, 1.1 million acres are smothered by woody weeds like strawberry guava and albezia. The weed biomass has smothered our low elevation ohia/koa/hapuu forests which are rotting and are emitting without mitigation deleterious greenhouse gasses without any treatment.

Finally we have the pent up potential of our forest industry to consider. One of the best ways to sequester carbon is in long lasting wood products and replanting the lands in timber sequestering carbon. An essential in all wood processing is processing wood waste so that it doesn't simply rot. Producing energy by using the wood waste is essential in producing fine forest products throughout the industry.

We all agree that we want to reduce climate change; this bill if passed, will greatly inhibit best management practices.

Sincerely,

Peter Simmons, Ret.

SB-2102
Submitted on: 1/28/2024 9:59:35 AM
Testimony for EET on 1/30/2024 1:01:00 PM

Submitted By	Organization	Testifier Position	Testify
Regina Gregory	Individual	Oppose	Written Testimony Only

Comments:

Landfill sites are very scarce; carbon emissions can be reduced with best available technology; tourism and the military are far bigger contributors.

SB-2102
Submitted on: 1/29/2024 10:39:30 AM
Testimony for EET on 1/30/2024 1:01:00 PM

Submitted By	Organization	Testifier Position	Testify
Keoni Pikini	Individual	Oppose	Written Testimony Only

Comments:

I am strongly opposing this sb 2102 bill because of recent blackout situations. These situations only prove that Hawaii cannot depend on solar and storage and is in need of reliable firm power generation like renewable energy created by biomass. Biomass renewables also create hundreds if not thousands of jobs for the local economy from operations to transportation. Biomass is the only true way we can keep our energy local, reliable and affordable 24/7/365!

SB-2102
Submitted on: 1/29/2024 10:51:12 AM
Testimony for EET on 1/30/2024 1:01:00 PM

Submitted By	Organization	Testifier Position	Testify
Dylan Gaspar	Individual	Oppose	Written Testimony Only

Comments:

To whom it may concern,

My name is Dylan Gaspar and I strongly do not support this bill as it does not benefit the Hawaii State to reach its goal of 100% firm renewable energy. I also do not support this bill because it negatively impacts job opportunities.

SB-2102
Submitted on: 1/29/2024 11:52:51 AM
Testimony for EET on 1/30/2024 1:01:00 PM

Submitted By	Organization	Testifier Position	Testify
Ronald B Clough	Individual	Oppose	Written Testimony Only

Comments:

I strongly oppose this measure. As a resident of Hawaii who lives on the Big Island we need all forms of renuable energy and ths measure seems to be a target of Honua Ola Bioenergy which employs a group of local workers and was ready to ease our dependance on fossil fuel. I encourage you to vote against this measure!

SB-2102
Submitted on: 1/29/2024 12:19:50 PM
Testimony for EET on 1/30/2024 1:01:00 PM

Submitted By	Organization	Testifier Position	Testify
Lowen Moses	Individual	Oppose	Written Testimony Only

Comments:

I strongly oppose

LATE

SB-2102
Submitted on: 1/29/2024 4:06:42 PM
Testimony for EET on 1/30/2024 1:01:00 PM

Submitted By	Organization	Testifier Position	Testify
Bobby Farias	Individual	Oppose	Written Testimony Only

Comments:

Aloha Chair DeCoite, Chair Gabbard and members of the Committee,

I would like to submit my **opposition** to SB2102 to eliminate biomass from the renewable portfolio standard definition of "renewable energy".

Biomass gasification is technology that uses a controlled process of digestion of biomass to creat **Renewable Natural Gas Without Combustion.** This is a proven Green Energy method.

Please reconcider Non Combustion Biomass methods to continue to be part of the renewable energy standard definition.

Thank you for your time,

Bobby Farias