DAVID Y. IGE
GOVERNOR

CRAIG K. HIRAI
DIRECTOR

GLORIA CHANG
DEPUTY DIRECTOR

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

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

WRITTEN ONLY

TESTIMONY BY CRAIG K. HIRAI
DIRECTOR, DEPARTMENT OF BUDGET AND FINANCE
TO THE SENATE COMMITTEE ON WAYS AND MEANS
ON
SENATE BILL NO. 2513, S.D. 1

February 22, 2022
10:00 a.m.
Room 211 and Videoconference

RELATING TO RENEWABLE ENERGY

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

Senate Bill No. 2513, S.D. 1, adds two new sections to Part 1 of Chapter 269, HRS, to require: 1) the Public Utilities Commission (PUC) to require each electric utility to issue requests for proposals (RFP) for both firm and intermittent renewable energy generation (REG); 2) each RFP for firm and intermittent REG to include the capability of the REG system to be offline for up to 96 hours due to weather but still be able to deliver a certain level of energy while offline; 3) the PUC to deny RFPs that do not meet or exceed the prior requirement; 4) the PUC to not approve any new or renewed utility-owned generation project by a public utility or any new or renewed purchase power agreement for electricity generation with affiliated interests with a public utility; and 5) the Hawai'i State Energy Office (HSEO) to submit a report to the Legislature no later than 20 days prior to the 2023 Regular Session on its findings, recommendations, and proposed legislation. This bill also appropriates $100,000 in general funds for FY 23 for HSEO to conduct a study of the available firm and intermittent renewable energy resources available on each island.

B&F notes that, with respect to the general fund appropriation in this bill, the federal Coronavirus Response and Relief Supplemental Appropriations Act requires that states receiving Elementary and Secondary School Emergency Relief (ESSER) II funds and Governor's Emergency Education Relief II funds must maintain state support for:

- Elementary and secondary education in FY 22 at least at the proportional level of the state's support for elementary and secondary education relative to the state's overall spending, averaged over FYs 17, 18 and 19; and
- Higher education in FY 22 at least at the proportional level of the state's support for higher education relative to the state's overall spending, averaged over FYs 17, 18 and 19.

Further, the federal American Rescue Plan (ARP) Act requires that states receiving ARP ESSER funds must maintain state support for:

- Elementary and secondary education in FY 22 and FY 23 at least at the proportional level of the state's support for elementary and secondary education relative to the state's overall spending, averaged over FYs 17, 18 and 19; and
- Higher education in FY 22 and FY 23 at least at the proportional level of the state's support for higher education relative to the state's overall spending, averaged over FYs 17, 18 and 19.

The U.S. Department of Education has issued rules governing how these maintenance of effort (MOE) requirements are to be administered. B&F will be working with the money committees of the Legislature to ensure that the State of Hawai‘i complies with these ESSER MOE requirements.

Thank you for your consideration of our comments.

DAVID Y. IGE
GOVERNOR

JOSH GREEN
LT. GOVERNOR

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CATHERINE P. AWAKUNI COLÓN
DIRECTOR

JO ANN M. UCHIDA TAKEUCHI
DEPUTY DIRECTOR

Testimony of the Department of Commerce and Consumer Affairs

Before the
Senate Committee on Ways and Means
Tuesday, February 22, 2022
10:00 a.m.
Via Videoconference

On the following measure:
S.B. 2513 S.D. 1, RELATING TO RENEWABLE ENERGY

Chair Dela Cruz and Members of the Committee:

My name is Dean Nishina, 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 require the Public Utilities Commission (Commission) to have electric utilities separately issue requests for proposals for firm renewable energy generation and requests for proposals for intermittent renewable energy generation; to prohibit the Commission from approving any new or renewed utility-owned generation project by a public utility or any new or renewed power purchase agreement for electricity generation with affiliated interests with a public utility; and, to appropriate moneys to the Hawaii State Energy Office to conduct a study.

This measure was amended to insert language that requires each request for proposals for intermittent renewable energy generation to include the capability of the renewable energy system to be offline for a period of up to ninety-six hours due to weather but still be able to deliver, while offline, renewable energy in an amount equal

to the average kilowatt hours that was delivered in the ninety-six hours before the system went offline, and specifying that responses to intermittent renewable energy requests for proposals that do not demonstrate that they meet or exceed this requirement shall not be considered by the Commission; to clarify that the Public Utilities Commission shall have the discretion to determine what type of request for proposals best meets the needs that give rise to future requests for proposals; and, to clarify that burning trees or other wood products shall not be considered an acceptable generation source for either "firm renewable energy" or "intermittent renewable energy".

The Department appreciates the intent to simplify and expedite procurement processes, potential concerns with reliability, and the concerns with a utility taking improper actions when an electric utility may be proposing a self-build option for resources. The Department believes that the proposed measure may have unintended consequences that may adversely affect Hawaii's ability to evolve the electric industry, the evolving regulation of the electric industry, and the ability to cost-effectively meet customer and grid needs.

Regarding the first proposal in Section 2 of the bill, evidence supports having all-source RFPs for resources. Consistent with the evolution of technology and available solutions in the electric industry, there has been an observed need to modify how resources are procured by the electric utility companies. Rather than simply relying on RFPs that request one type of generation resource, by clearly stating the objectives and allowing the market to respond with solutions that facilitates new investment in technologies, this encourages more interest from a broader range of market participants as opposed to limiting it to the fewer sources of more traditional generation resources. As further evidence of this evolution in the electric industry, there are various studies that support consideration of all resource RFPs, such as Rocky Mountain Institute's How to Build Clean Energy Portfolios, A Practical Guide to Next-Generation Procurement Practices (2021) and Energy Innovation and Cleanenergy.org's Making the Most of the Power Plant Market: Best practices for All-Source Electric Generation Procurement (2020). Consistent with this evolution, the Commission has been working on disaggregating the various grid services associated with "firm" energy for several

years. The Commission's actions are consistent with the recommendation in the Energy Innovation study that offers "Regulators should require utilities to conduct a competitive, all-source procurement process, with robust bid evaluation. (Energy Innovation study, at 3). Therefore, codifying in statute that "firm" or "intermittent" RFPs will be required may be perceived as a step backwards, instead of forwards, with respect to Hawaii's energy industry evolution. It is noteworthy that, in the RMI study, there is a recommendation that, in order to support having rules that encourage or require competitive procurement (and a commission that can support them), the RMI study recommends that legislatures should consider statutes that require utilities to issue all-source solicitations (RMI study, at 12), and points to Colorado and Washington as states that have requirements for all-source procurement in state statute or administrative code (RMI study, at 29). While S.D.1 has incorporated modifications that appears to address concerns with limiting the recommended flexibility in order to stimulate a broader and robust market response to future RFPs, those modifications appear to still establish somewhat rigid "firm" and "intermittent" categories. The Department is concerned that the proposed language in Hawaii Revised Statutes (HRS) Section 269-_(a) that requires intermittent renewable projects bidding into an RFP to be able to provide as much energy over a ninety-six hour-period when they are offline as the average amount of energy they provided over ninety-six hours online. This restriction could severely limit the market response to future RFPs or result in responses that are much more expensive to meet energy-only needs that could be met at a lower cost. Again, the Department believes that it would be best if the legislature allows flexibility to the Commission to determine what type of RFP best meets the needs that give rise to those future RFPs.

The Department acknowledges that there may be isolated future occasions where it may make sense to have a simplified and expedited procurement to address an urgent, critical need but the Department respectfully offers that there should be flexibility allowed to accommodate situations where an all-resource RFP or a more traditional and structured RFP could be optimally used for the situation.

The Department notes the proposed exclusion of biomass as a firm or intermittent renewable generation source in S.D.1. The Department notes that this exclusion appears to conflict with the inclusion of biomass as a source of renewable energy in HRS § 269-91 for the purposes of calculating an electric utility's Renewable Portfolio Standard under HRS 269, Part V. The Department respectfully suggests that, to avoid the possibility of inconsistent application of the Chapter, if this measure moves forward, it may be worth considering modifying the definition of "renewable energy" in HRS § 269-91, including acceptable definitions of "firm renewable energy" and "intermittent renewable energy".

The second proposal in Section 2 of the bill will not allow electric utilities to bid or build on any new or renewed generation project or enter into a new or renewed power purchase agreement with an affiliate for a generation project. The Department shares the concern that if an electric utility engages or appear to engage in practices that might be anticompetitive, this could discourage interest from third parties in responding to future RFPs for generation resources. It is for this reason that rules and guidelines have been adopted to address this concern as well as modifying procurement practices to ensure that enhanced oversight by an independent observer during the procurement process. The recent examples referred to in the preamble to this bill support the need to revisit those guidelines, consideration of possible penalties as part of the guidelines or in the performance based regulations incentive mechanisms, and/or evaluating whether additional resources may be required to further enhance the independent observer and commission's ability to further mitigate, if not eliminate, similar undesirable events in the future.

The Department is concerned, however, that an outright prohibition of electric utility companies building or owning new or renewed resources could have undesirable and unintended consequences to customers, especially vulnerable and low-income customers and communities. In support of this concern, the Department offers that, from an economic perspective, removing any competitor, even the utility, results in less robust competition and could deny customers the potential benefit of more robust competition. If the electric utility could respond with a solution that is the least-cost

option and other respondents could not beat that solution in terms of price and/or value to customers, prohibiting the electric utility from participating would deny customer the benefit from that possibility. Furthermore, there will be a likely need for solutions to meet certain system needs or vulnerable and/or low-income customer needs that competitors will not view as profitable or favorable to their portfolios unless they are paid a premium. In fact, there have already been an instance when there has been less than robust and competitive responses to an RFP seeking new renewable generation in a smaller Hawaii market. In those instances, if the utility can provide the necessary solutions and other competitors are unwilling and/or uninterested in responding to an RFP, the proposed prohibition of the electric utility to build and/or own generation would not be in the public interest. In addition, if repurposing existing thermal generating units to rely on renewable sources of fuel is part of a cost-effective plan to reach 100% renewable energy, adopting this prohibition would deny that possibility.

Finally, for Section 3 of the bill, the Department respectfully defers to the State Energy Office as it relates to completing the study but suggests that additional clarity on the desired objectives of the study may help to achieve the stated intent of the bill. There is already available information on the generation resources – both fossil fueled and renewable as well as whether such resources are firm or intermittent – on each island. Thus, further clarity on the desired outcome would help to ensue that the State Energy Office provides the legislature with the information that it is seeking.

Thank you for the opportunity to testify on this bill.

HAWAII STATE ENERGY OFFICE
STATE OF HAWAII

DAVID Y. IGE
GOVERNOR

SCOTT J. GLENN
CHIEF ENERGY OFFICER

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Testimony of
SCOTT J. GLENN, Chief Energy Officer

before the
SENATE COMMITTEE ON WAYS AND MEANS

Tuesday, February 22, 2022
10:00 AM
State Capitol, Conference Room 211 & Videoconference

COMMENTS
SB 2513, SD1
RELATING TO RENEWABLE ENERGY.

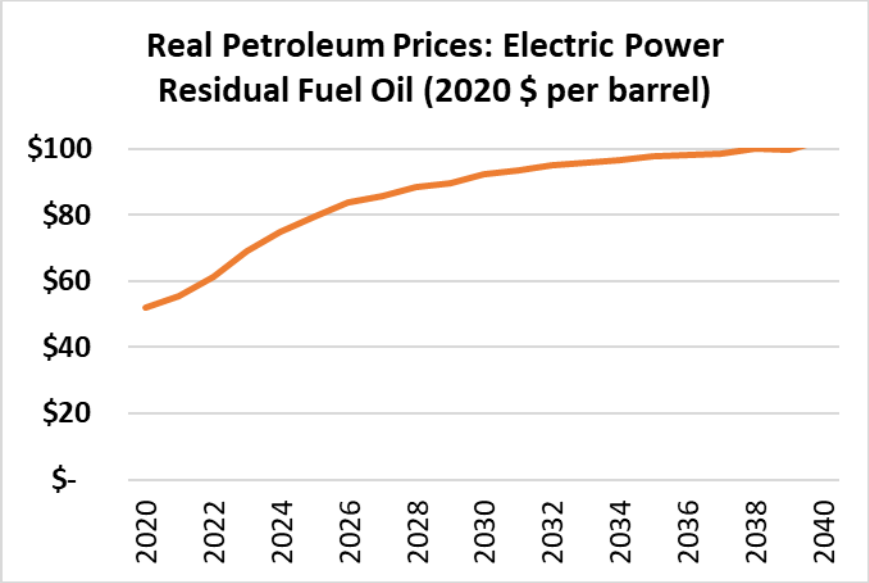
Chair Dela Cruz, Vice Chair Keith-Agaran, and Members of the Committee, the Hawai‘i State Energy Office (HSEO) offers comments, including several concerns, regarding SB 2513, SD1, which appears to have the effect of seriously constraining and complicating electricity production in Hawai‘i and potentially interfering with and preventing the retirement and replacement of fossil-fueled power plants in Hawai‘i.

Overall, HSEO is concerned that the statutory changes proposed by the bill would be difficult to interpret in their current form, may interfere with the ability of the utility to successfully contract for electricity generation, and that the combination of extreme limitations and strict requirements would ultimately result in failed procurements and significantly higher overall costs for electricity.

HSEO understands concerns exist regarding the recent rounds of procurement on O‘ahu for energy to replace the retiring coal plant resulting in only solar plus battery technologies being procured. Rather than pursue restrictions on procurement with potential long-term, costly unintended consequences, however, HSEO continues to support legislative efforts to create incentives such as the renewable fuels tax credit, the Moloka‘i biofuel pilot project, and the allocation for geothermal exploration on Department of Hawaiian Home Lands to promote renewable resources having many of the desired characteristics that this bill seeks to promote.

HSEO also believes the current approach to procurement, in which operational parameters are established based on the needs of the grid at the time of the procurement, offers the greatest opportunity for managing electricity costs and affordability, as it allows bids to reflect the technologies and costs that are available and complementary to the existing grid and projected resources at the time of the procurement. Both the electric utility and the Public Utilities Commission are taking steps to improve procurement while implementing these operational parameters.

Therefore, HSEO believes the changes proposed by section 2 of SB 2513, SD1, are unnecessary. The prevention of successful procurements of new renewable energy generation would have the unintended consequence of continued reliance on current fossil fuel generating units, increasing emissions and costs of electricity[1] and negative impacts on Hawai'i's economy and environment.



In addition to the overall concerns above, specific concerns with the requirements and language of SB2513, SD1, include:

On page 6, starting on line 17, it is unclear what is meant by "the capability of the renewable energy system to be offline for a period of up to ninety-six hours due to weather but still be able to deliver, while offline, renewable energy in an amount equal to the average kilowatt hours that was delivered in the ninety-six-hour period before the

[1] The U.S. Energy Information Administration's *Annual Energy Outlook 2021* projected residual fuel oil prices would increase, in real (2020) dollars, from $61 per barrel in 2022 to $103 per barrel in 2040. Note: That was prior to the current situation with Russia and Ukraine.

system went offline." Since a system that is offline is (by definition)[2, 3] not delivering electricity to the grid, it appears that this language would require the system to be able to either:

a. produce some other form of energy during four days of being disconnected from the grid, or
b. provide electricity to some other customer for four days.

The reason or benefit of such a requirement is not stated. Also, the situations under which the systems would be capable of providing energy while offline "due to weather," yet still capable of functioning at full capacity, are unclear. If this is a sincerely intended requirement, a more complete explanation would be warranted in order to fully express the Legislature's desired objective.

Regarding the definition of "firm renewable energy" on page 7, lines 8-14, HSEO notes that a strict or narrow reading of the language ("always available and capable of being continuously produced at its contracted capacity twenty-four hours per day, three hundred sixty-five days per year, subject **only** to routine maintenance and emergency repairs") may be interpreted to exclude any system that is also subject to the availability and receipt of certain inputs (fuel) for its operation.[4]

Taking the view that any generator that requires fuel in order to run is "subject to" the receipt of that fuel in order to be "capable of being continuously produced at its contracted capacity twenty-four hours per day, three hundred sixty-five days per year" would potentially eliminate any system using fuel (including biofuel, hydrogen, renewable natural gas, or solid fuel). As "trees and other wood products" are explicitly prohibited by the bill on page 7, lines 12-13, the net result under this interpretation is that eligible "firm renewable" technologies would be limited to geothermal and ocean energy (wave, ocean thermal) sources, which are not subject to the availability or delivery of fuel. However, as these systems are limited in location and, in some cases,

[2] U.S. Department of Energy, Office of Electricity Delivery and Energy Reliability. 2015. *United States Electricity Industry Primer*.
[3] Hawaiian Electric Company. 2016. *Power Supply Improvement Plan, Book 2 of 4*.
[4] Emphasis added.

technological maturity, HSEO is concerned about broad application of such a narrow requirement.

Another interpretation of the requirement, focusing on the specific language of “contracted capacity twenty-four hours per day, three hundred sixty-five days per year,” would be that “firm power” contracts would specify the minimum capacity required at each hour, twenty-four hours per day, three hundred sixty-five days per year. It appears that this requirement could be met (albeit at a greater cost) by a variety of technologies, including wind and solar, with batteries. However, such an unusual approach may severely constrain (have a limiting effect on) potential bids, and as an inflexible and unusual approach, would likely lead to increased costs, severely limit grid dispatch and optimization of energy use based on resource availability, and potentially result in severe and unnecessary over-building. if this is a sincerely intended requirement, a more complete explanation would be warranted in order to accurately express the Legislature’s desired objective and inform agency implementation.

HSEO is also concerned that on page 8, lines 1 through 7, the prohibition against any utility owning its own generation is an extremely broad prohibition, which may affect not only investor-owned electric utilities, but also cooperatives and non-electric utilities, including gas and water utilities owning their own renewable energy generation projects to power their equipment or pursue hydrogen production.

Regarding the assignment in Section 3 of the bill, HSEO concurs with the need for and value of studies of available resources and technologies within the overall analysis of the pathways to reaching the state’s renewable energy and net negative carbon emissions goals. HSEO requests that, due to the time required for the procurement process, any report to the Legislature be submitted prior to the convening of the 2024 regular session.

HSEO defers to the appropriate agencies on the topic of utility power procurements, potential impacts on consumers, increases in emissions, and other matters in this bill.

HSEO’s comments are guided by its mission to promote energy efficiency, renewable energy, and clean transportation to help achieve a resilient, clean energy, decarbonized economy.

Thank you for the opportunity to testify.

Tawhiri Power LLC ™

TESTIMONY OF TAWHIRI POWER LLC
ON SB 2513, SD1 BEFORE THE SENATE COMMITTEE ON
WAYS AND MEANS
TUESDAY, FEBRUARY 22, 2022 AT 10 a.m.

TO THE HONORABLE CHAIR DELA CRUZ, VICE CHAIR KEITH-AGARAN AND MEMBERS OF THE COMMITTEE:

Tawhiri Power LLC ("TPL")[1] submits the following testimony in STRONG OPPOSITION to the language on p. 6, lines 11-21 and p. 7, lines 1-3 and request that this language be stricken from the bill. Specifically, the language we request to be stricken is:

§269- Requests for proposals. (a) ~~The public utilities commission shall require each utility to issue requests for proposals for firm renewable energy generation and requests for proposals for intermittent renewable energy generation. Each request for proposals for intermittent renewable energy generation shall include the capability of the renewable energy system to be offline for a period of up to ninety-six hours due to weather but still be able to deliver, while offline, renewable energy in an amount equal to the average kilowatt hours that was delivered in the ninety-six -hour period before the system went offline. Responses to intermittent renewable energy requests for proposals that do not demonstrate the capability to meet or exceed this requirement shall not be approved by the public utilities commission.~~

This bill in its current form would be a major step backwards and would erase all the progress that the State has made in the last several years in promoting renewable energy. Having separately based RFP's for firm versus intermittent renewable energy generation does a disservice to ratepayers. To have true competition, ALL renewable generation sources should be able to participate in any RFP. In other words, any

[1] TPL is an Independent Power Producer ("IPP") that owns and operates Pakini Nui Wind Farm located in the South Point Area on the Island of Hawaii.

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Pakini Nui Wind Farm, 93-1373 South Point Road, Kau, Hawaii 96772

renewable RFP should be “ALL SOURCE”, with the proposals that are best for the ratepayers and public interest being selected whether its firm or intermittent.

Respectfully, codifying in statute that separate firm and intermittent RFPs be required limits the potential choices in an RFP, is a disservice to ratepayers, is not promoting healthy competition, and is not following best practices.[2] In the past, HELCO has issued an RFP which limited bidders to only one source of renewable energy, geothermal. That RFP was subsequently dropped due, in part, to HELCO’s own reluctance to move forward with the RFP. We must learn from the past, which has shown that “ALL SOURCE” RFPs provide the most options and opportunities for the ratepayers.

Additionally, the language inserted by the prior Committees regarding “metrics” that must be met in order to submit a qualifying proposal from an intermittent renewable energy generator is, respectfully, also a step backwards, and not in the best interest of the State and its electrical consumers. As currently written, the only way for a potential bidder of intermittent generation to meet these draconian “metrics" is for the bid to include an auxiliary generation capability able to supply the full nameplate capacity of the primary generation source for up to 96 hours. These “metrics” are not appropriate for the following reasons:

1. First, certain intermittent renewable energy resources like wind energy generation can realize full output capacity for days or even weeks on end. What size auxiliary generation should be used- during 96 hour periods of maximum or near maximum output, 96 hour periods during no or low generation, or some other period?

2. Second, there may be times when it is not in the best interest for the electric

[2] See Testimony of the Department of Commerce and Consumer Affairs and the Public Utilities Commission before the Senate Committees on Commerce and Consumer Protection and Energy, Economic Development, and Tourism on SB2513 on February 8, 2022.

utility to solicit the additional offline generation being required in SD1 because there simply may not be a need for it. This added language will force the utility to accept higher priced bids containing excess stand-by generating capability which ratepayers will be forced to pay for. This is not in the best interest of the ratepayer.

The era of 24/7 firm baseline units is outdated. Rather, today's cleaner modern electrical grid needs flexibility. This flexibility is only obtained by giving the Public Utilities Commission the discretion to work with the electrical utilities to come up with the best generation mix for the ratepayers that includes both firm and intermittent renewable energy generation at a just and reasonable price.

This bill in its current form takes away all discretion from the Public Utilities Commission and basically makes it impossible to do their job.

Thank you for the opportunity to testify.

SB-2513-SD-1
Submitted on: 2/20/2022 7:44:20 PM
Testimony for WAM on 2/22/2022 10:00:00 AM

Submitted By	Organization	Testifier Position	Remote Testimony Requested
Ted Bohlen	Testifying for Climate Protectors Hawai‘i	Comments	No

Comments:

To: The Honorable Donovan Dela Cruz, Chair, The Honorable Gilbert Keith-Agaran, Vice Chair, and Members of the Senate Committee on Ways and Means

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

Re: Hearing: SB2513 SD1 **RELATING TO RENEWABLE ENERGY.**

Hearing: Tuesday, February 22, 2022, 10:00 a.m., Rm. 211 and by videoconference

Aloha Chair Dela Cruz, Vice Chair Keith-Agaran, and members of the Senate Committee on Ways and Means:

The Climate Protectors Hawai‘i is a group focused on reversing the climate crisis and encouraging Hawai‘i to lead the world towards a safe and sustainable climate and future. Though we appreciate the intent of this bill to accelerate provision of renewable power, **the Climate Protectors Hawai‘i COMMENTS that the bill must be amended!**

It is good that the SD1 removed language that would have required utilities to issue separate Request For Proposals (RFPs) for firm and intermittent power. Such solicitations should be "all source," and the PUC should have discretion to select the best mix of power sources to optimize benefits to ratepayers and the environment. It is also **good and essential** for mitigating greenhouse gas emissions that the bill now clarifies **that burning trees and other wood products shall not be considered an acceptable generation source for either firm or intermittent renewable power.**

However, the new requirement that intermittent power sources must be able to deliver equivalent power for 96 hours when they are not generating is too stringent! It would prevent approval of most if not all competitive bids for any solar or wind projects in Hawai‘i, contrary to the strong public interest in developing such sources. This provision must not become law or it will hamper achievement of Hawaii's goals for decarbonization and 100% clean renewable energy.

Please amend this bill or defer it!

Mahalo!

Climate Protectors Hawai‘i (by Ted Bohlen)

To: The Senate Committee on The Senate Committee on Ways and Means
From: Sherry Pollack, 350Hawaii.org
Date: Tuesday, February 22, 2022, 10am

In strong opposition to SB2513 SD1

Aloha Chair Dela Cruz, Vice Chair Keith-Agaran, and members of the Committee on Ways and Means,

I am Co-Founder of the Hawaii chapter of 350.org, the largest international organization dedicated to fighting climate change. 350Hawaii.org **strongly opposes SB2513 SD1.**

This decade is our make-or-break opportunity to avoid the most devastating effects of climate change. 350Hawaii supports and encourages the efforts of the legislature to transition Hawaii to truly clean, non-climate harming renewable energy. We welcomed the SD1 amendment to this measure which stated *burning trees or other wood products shall not be considered an acceptable generation source for either "firm renewable energy" or "intermittent renewable energy,"* due to the devastating emission levels that result. However, other provisions in the language of this measure are very problematic and would result in thwarting crucial efforts toward expanding solar and wind energy production. We must maximize, and not impede, the use of clean, carbon-free renewable energy sources like wind and solar energy if we are to achieve our emission reduction goals. Anything less will result in devastating consequences to our environment and climate.

While this bill is well intentioned, SB2513 SD1 as written would undermine our progress towards 100% truly clean, renewable energy and take us in the wrong direction.

Mahalo for your consideration and for the opportunity to testify on this measure.

Sherry Pollack
Co-Founder, 350Hawaii.org

TESTIMONY OF
JAMES P. GRIFFIN, Ph.D.
CHAIR, PUBLIC UTILITIES COMMISSION
STATE OF HAWAII

TO THE
SENATE COMMITTEE ON
WAYS AND MEANS

February 22, 2022
10:00 a.m.

Chair Dela Cruz and Members of the Committee:

MEASURE: S.B. No. 2513, SD1
TITLE: RELATING TO RENEWABLE ENERGY.

DESCRIPTION: Requires the Public Utilities Commission to have electric utilities separately issue requests for proposals for firm renewable energy generation and requests for proposals for intermittent renewable energy generation. Prohibits the Public Utilities Commission from approving any new or renewed utility owned generation project by a public utility or any new or renewed power purchase agreement for electricity generation with affiliated interests with a public utility. Appropriates moneys to the Hawaii State Energy Office to conduct a study. Effective 7/31/2050. (SD1)

POSITION:

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

COMMENTS:

The Commission is committed to fostering an efficient, competitive process to maximize the benefits of the clean energy transition. The Commission is concerned that several provisions in this measure would have unintended consequences and would compromise the State's ability to achieve its energy goals in an efficient and economical manner.

First, this measure would require the Commission to mandate that electric utilities separately issue requests for proposals ("RFPs") for "firm" renewable energy generation and for "intermittent" renewable energy generation. The Commission appreciates the acknowledgement offered by the Committees on Commerce and Consumer Protection

and Energy, Economic Development, and Tourism regarding the potential consequences of this mandate:

> Your Committees note the concerns raised in testimony that restricting the Public Utilities Commission's ability to conduct solicitations according to industry best practices could negatively affect achievement of the State's energy goals. Accordingly, amendments to this measure are necessary to address these concerns. Your Committees have amended this measure by: (1) Removing language that would require electric utilities to issue requests for proposals for firm renewable energy generation and requests for proposals for intermittent renewable energy generation separately […][1]

The Commission notes that this version still contains language that could be interpreted as requiring the Commission to issue separate RFPs for generation that is defined as "firm" or "intermittent." In addition, this version of the measure also includes language that would limit RFPs for intermittent generation to projects that are capable of delivering, while offline, "renewable energy in an amount equal to the average kilowatt hours that was delivered in the ninety-six hour period before the system went offline." Technical requirements such as what is proposed in this measure should be based on the utility's most current grid needs assessment and implemented into competitive solicitations at the direction of the Commission. Codifying such a requirement in statute will greatly reduce opportunities to incorporate future technological advancements and innovations, substantially reduce the competitive pool of potential proposals, and restrict the Commission's ability to ensure that electric utilities put forth well-designed and intentional resource solicitations.

As such, should this measure be adopted, the Commission respectfully recommends that the Committee remove the proposed language from page 6, line 11, to page 7, line 18, which would require separate RFPs for resources defined as "firm" and "intermittent" resources and limit the ability of the state's electric utilities to procure the most cost-effective and technologically advanced resources for customers.

It is the Commission's intention to advance the state's electric utilities toward industry-leading practices and innovative regulatory structures that incentivize competitive pricing and efficient operations. The Commission believes that requiring separate RFPs for

[1] S.S.C.R. No. 2267, February 14, 2022, at 2.

resources defined as "firm" and "intermittent" may have unintended consequences, leading to sub-optimal procurements of generation and grid services, while increasing customer costs. For this reason, the Commission has repeatedly and consistently directed Hawaiian Electric to assess grid needs and conduct competitive, technology-agnostic solicitations to fulfill identified needs in the manner that is most beneficial to ratepayers, the economy, and the environment.

The Commission is committed to fostering an energy sector that keeps pace with rapidly evolving technology capabilities and costs, as well as industry best practices. A recent report by Rocky Mountain Institute ("RMI") and Regulatory Assistance Project ("RAP") outlined "a practical guide to next-generation procurement practices,"[2] which described industry best practices and recommendations for legislators, regulators, and utilities to consider. Among other findings, the report finds that legislatures "should consider statutes that require utilities to issue all-source solicitations,"[3] stating further:

> Needs have become more dynamic with changing customer preferences, new public policies, declining resource costs, and rapidly changing resource mixes. Yet, common practices for procurement retain an antiquated representation of system needs that are tied to the characteristics of legacy technologies.
>
> In contrast, an all-source approach to procurement can increase competition and enable utilities to select an optimal resource portfolio from a set of diverse and interactive resource options. Using a portfolio approach that enables multiple resources to participate concurrently can enable emerging energy technologies, especially renewables, batteries, and demand-side management (DSM), to reach their full market potential.[4]

In recent years, the Commission has shifted toward this type of needs-based, competitive approach. The Commission believes, as supported by industry best practices, that all-source solicitations are critical in meeting each island's unique grid needs in an

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[2] Lauren Shwisberg, Mark Dyson, Grant Glazer, Carl Linvill, and Megan Anderson, How to Build Clean Energy Portfolios: A Practical Guide to Next-Generation Procurement Practices, RMI, 2020, https://rmi.org/how-to-build-ceps/.

[3] RMI, p. 12.

[4] RMI, p. 22.

economical, environmentally positive, and ratepayer friendly manner. To the extent that any firm resource is found to be the most competitive resource to meet any identified grid need, that resource will ultimately be selected through an all-source, competitive process. Circumventing or otherwise distorting the competitive process could lead to sub-optimal proposals being selected, at higher costs to ratepayers, often through power purchase agreements with costs that fall to ratepayers throughout their multi-decade terms.

In addition, this measure identifies and seeks to alleviate potential concerns related to electric utilities putting forth self-build proposals for electricity generation. The Commission acknowledges that this is an ongoing issue, which requires extensive oversight with Independent Observers and Affiliate Transaction Requirements. The Commission raised this matter in 2014 in the *Commission's Inclinations on the Future of Hawaii's Electric Utilities*[5], in which it stated:

> The Commission will consider whether it is reasonable and in the public interest to preclude the HECO Companies, as a matter of regulatory and public policy, from ownership of new generation and incent accelerated retirement of old, inefficient fossil generation in order to further diminish inherent financial conflicts with utility ownership of generation.[6]

In recent years, the Commission has worked to mitigate these concerns through improved RFP processes and independent oversight, in order to maintain a level playing field between company-owned proposals and independent power producers. For example, the Commission has solicited public comments and contracted with Independent Observers to thoroughly vet draft RFPs, in addition to monitoring communications between RFP and self-build teams, implementing codes of conduct related to interactions between utility employees, and investigating and reporting on any potential breaches or alleged competitive concerns. In the example cited in the bill, the Commission directed the Independent Observer for the CBRE RFPs to investigate the allegations and provide regular updates to the Commission, so that these concerns could be thoroughly assessed and mitigated.

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[5] Commission's Inclinations on the Future of Hawaii's Electric Utilities: Aligning the Utility Business Model with Customer Interests and Public Policy Goals, Hawaii Public Utilities Commission, 2014, https://puc.hawaii.gov/wp-content/uploads/2014/04/Commissions-Inclinations.pdf.

[6] Commission's Inclinations, p. 19.

Noting the Commission's stated inclinations and recent actions on this matter, the Commission supports the intent of this portion of the measure to improve competition. However, the Commission does have concerns that precluding utility ownership of generation altogether could bring about unintended consequences in certain circumstances. It is for this reason that, to this point, the Commission has not taken the step of prohibiting utility ownership of generation outright.

One potential consequence of precluding utility ownership altogether is that doing so would complicate or potentially eliminate any options to re-power existing utility-owned generation with renewable fuels, should such an option be cost-effective in the future. It is unclear whether, and how, an independent power producer could take over ownership and operations from a utility for an existing utility-owned unit, particularly in cases of power plants with multiple generating units located in the same facility. It is possible that this issue could be addressed by limiting the prohibition on utility ownership to specific types of new projects, such as "greenfield" projects, not associated with any existing generation units, rather than prohibiting it regardless of the context.

With these concerns noted, the Commission is willing to work with the Committees and stakeholders on potential statutory changes that would offer improvements on the current status of utility-owned generation and reduce future challenges in this regard.

The Commission takes no position and defers to the Hawaii State Energy Office on the language in Section 3 of the measure, which would initiate a study of available firm and intermittent resources available on each island.

Thank you for the opportunity to testify on this measure.

TESTIMONY BEFORE THE SENATE COMMITTEE ON WAYS AND MEANS

S.B. 2513 S.D.1

Relating to Renewable Energy

Tuesday, February 22, 2022
10:00 a.m., Agenda Item #21
State Capitol, Conference Room 211 & Videoconference

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

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

My name is Rebecca Dayhuff Matsushima and I am testifying on behalf of Hawaiian Electric Company, Inc. ("Hawaiian Electric" or the "Company") respectfully in **strong opposition** to S.B. 2513, S.D. 1, Relating to Renewable Energy.

S.B. 2513 S.D. 1 will hinder the state of Hawai'i's achievement of its renewable energy goals. This bill will unnecessarily raise electric bills, result in the use of more undeveloped land, add to community impacts, cause renewable projects to compete for lands with other important resources, require additional transmission infrastructure, result in the loss of numerous local jobs, require reliance on undeveloped technologies, waste existing in place resources, and result in electric resource planning that is not based on sound analysis and planning, but on mandated procurements whether or not such resources are necessary. In effect, this bill has the capability to significantly harm if not kill Hawai'i's ability to reach its renewable energy goals.

Chapter 269-_, Requests for proposals, subsection (a) starts by stating that the Public Utilities Commission ("PUC") shall require each electric utility to issue requests

for proposals ("RFP") for firm renewable energy generation and requests for proposals for intermittent renewable energy generation.

As the entity responsible for delivering reliable and renewable energy to the majority of the state, it is imperative that the utility to be able to issue RFPs based on the needs of the system. The proposed bill circumvents the utility's Grid Needs Assessment process, which would determine what the utility and its customers' actual energy needs are, and preclude the utility from implementing proper procurements to meet such needs.

Even more harmful, the bill continues on to provide that each RFP for intermittent renewable energy generation shall include the capability of the renewable energy system to be offline for a period of up to ninety-six hours due to weather but still be able to deliver, while offline, renewable energy in an amount equal to the average kilowatt hours that was delivered in the ninety-six-hour period before the system went offline. This would effectively require all intermittent resources to be paired with extremely expensive long duration storage, whether or not such storage serves customers' needs. Long duration storage is still a developing technology and may not be readily available to serve for such durations at any reasonable cost. Requiring projects to meet such a requirement would likely (1) spark strong community opposition due to the large footprints that would be necessary for such projects, (2) lead to grid reliability issues, as long duration storage has not yet established itself as a proven technology, (3) lead to assets that are not utilized in an optional manner, and (4) lead to unnecessary electricity price increases, as bid proposal prices would increase and these costs would be passed on to customers. Ultimately, this bill, if passed, will make it virtually impossible for Hawai‘i to meet its renewable energy goals.

Chapter 269-_, Requests for proposals, subsection (b) states that the PUC shall have the discretion to determine what type of RFP best meets the needs that give rise to future RFPs. Although the PUC should review and approve the RFP targets as well as the RFPs themselves, as noted above, the actual Grid Needs identified in the utility's Grid Needs Assessment should be dictating the RFP targets and the type of RFP that should be run to acquire such targets.

Chapter 269-_, Requests for proposals, subsection (c) provides the definitions for "firm renewable energy" and "intermittent renewable energy." It notably excludes from the definitions, the burning of trees and other wood products as an acceptable generation source. This is inconsistent with definition of renewable energy in HRS § 269-91 and such language should be removed from the bill. All generation, especially firm renewable generation will be needed to meet Hawaii's energy goals. The definition of renewable energy should be consistent throughout statutes. Further, the exclusion of such generation resources may reduce competition, leading to higher bid prices and ultimately higher electricity costs.

This bill also proposes to amend Chapter 269-_, Utility-owned generation projects; power purchase agreements for electricity generation; prohibited, subsection (a) by, among other things, prohibiting the PUC from approving any new or renewed utility-owned generation project by a public utility or any new or renewed power purchase agreements for electricity generation with affiliated interests with a public utility.

This bill would have a negative impact on Hawaiian Electric's ability to meet its obligation to serve customers reliably and would have a significant negative effect on the development of renewable energy projects and Hawaii's progress toward a 100%

renewable portfolio standard ("RPS"). By eliminating Hawaiian Electric's 130 years of experience in generating energy for the citizens of Hawaii from the market in favor of out-of-state developer interests, this bill will increase costs to customers and kill local union jobs

This bill would effectively prohibit any repowering opportunities at existing Hawaiian Electric facilities, which customers have already funded, to be re-purposed for new projects, which can in some circumstances reduce the cost of new resource proposals. This would mean less options for the development of firm renewables, forcing more dependence upon greenfield projects that would add community impacts, compete for lands, and require new and expensive overhead transmission lines that otherwise may have been avoided. These impacts ultimately would lead to a slower and more expensive compliance with the RPS law. Additionally, not renewing existing Hawaiian Electric renewable energy projects would waste established resources already approved by the PUC, increase the likelihood of placing the burden of stranded asset costs on our customers, and eliminate the PUC's ability to consider the value of potential residual energy and value of an existing project against the replacement cost of a new project.

This proposed amendment would have further negative impacts on the interests of Hawaii's workforce and economy. Projects by Hawaiian Electric or its affiliates ensure moneys stay in state, while simultaneously increasing the number of good union jobs in Hawai‘i.

This section, like previous sections of the bill mentioned above, would also hinder our State's ability to achieve its 100% RPS goal. In the past, a number of developers have had problems moving forward with their renewable projects, and in some cases,

have dropped out of the process. Disallowing affiliate and utility-build proposals further reduces our options for viable renewable energy projects and utility contingency plans that could allow continue progress toward RPS goals even when other developers' projects fail or are delayed. Eliminating the possibility of an affiliate or Hawaiian Electric proposal would place the interests of developers, mostly from out of state, above the best interests of our customers. Customers would no longer have access to the full range of options, as two established renewable energy developers would be removed from the market, resulting in lost opportunities for a lowest cost/highest value proposal.

The preamble of this bill is not supported by facts. The filings cited in the bill, including other PUC proceedings, and the results of Hawaiian Electric's Stage 2 RFPs demonstrate that the PUC's oversight of the process and safeguards already in place are effective, and selection is in no way predetermined, nor favors Hawaiian Electric's proposals. Hawaiian Electric's self-build team participated in the O'ahu Stage 2 RFP, but its proposal was not selected, clearly showing that the Company does not have any predetermined bias to selecting its own projects. The Stage 2 O'ahu RFP Independent Observer's report noted that Hawaiian Electric showed no undue preference during the evaluation process and evaluation of the self-build team's proposal was consistent with the RFP's rules and Code of Conduct, which are described further below. The filings cited in the bill were largely self-reported by the utility, were found to not have provided any undue advantage to the self-build team, and were remediated to the satisfaction of the Independent Observer overseeing the community based renewable energy RFP.

Hawaiian Electric notes that multiple protections are in place to safeguard against an unfair or biased bidding process. These include the Competitive Bidding Framework ("CBF") and associated Code of Conduct, which govern the competitive

bidding process and impose various safeguards. The CBF was approved by the PUC and has been in place since December 2006. An updated CBF was submitted to the PUC in February 2021. This updated CBF was developed with input from the Integrated Grid Planning Competitive Procurement Working Group, which included members from the PUC, Consumer Advocate, developers, industry specialists, and community and environmental groups. Under the guidelines of these governing documents, safeguards such as the inclusion of an Independent Observer to monitor all communications, code adherence, proposal evaluations, contract negotiations and the use of a third-party platform to receive bids from proposers are in place. This third-party platform does not allow the Hawaiian Electric energy procurement team to view any submitted bid until the proposal due date has passed, and does not allow the Hawaiian Electric proposal team or any affiliate access to any other bids. Additionally, Hawaiian Electric proposal team submission deadlines are set for one day prior to the due date for other bidders to further alleviate concerns that the Hawaiian Electric proposal team may modify bid information in response to developer bids.

These safeguards are further enforced by Hawaiian Electric's Code of Conduct Procedures Manual, which is also reviewed and approved by the PUC. Different teams and roles are clearly identified, and communications are strictly regulated through a designated process to reduce the likelihood of inadvertent sharing. This process includes a dedicated email box, the Independent Observer being copied on all emails, and the utilization of communication logs and marked headers when appropriate. Hawaiian Electric also utilizes a third-party document management system and storage system to establish limited access to files and folders, restricting unauthorized access

by certain individuals, groups, or teams. As noted above, this has been proven effective to ensure that there is no bias for Hawaiian Electric proposals.

Accordingly, Hawaiian Electric **strongly opposes** S.B. 2513 S.D. 1 and requests that this bill be held. Thank you for this opportunity to testify.

INTERNATIONAL BROTHERHOOD OF ELECTRICAL WORKERS
LOCAL UNION 1260
ORGANIZING THE FUTURE

SENATE COMMITTEE ON WAYS AND MEANS

HEARING DATE:	Tuesday, February 22, 2022
TIME:	10:00 a.m.
PLACE:	Via Video Conference Conference Room 211

RE: TESTIMONY **IN OPPOSITION** WITH A RECOMMENDATION OF SB2513 SD1

Aloha Honorable Chair Dela Cruz, Vice Chair Keith-Aragan, and Members of the Committee:

This testimony is being submitted by the International Brotherhood of Electrical Workers Local 1260 (IBEW 1260). IBEW 1260, is comprised of nearly 3,000 hardworking union members. Our members are a diverse workforce that largely consist of highly skilled and trained individuals working 24 hours a day, 7 days a week, to generate and transmit electricity here in the State of Hawai‘i. IBEW 1260 is in **OPPOSTION** of this bill which seeks to eliminate the Public Utility from any new or renewed generation project or purchase power agreement.

IBEW 1260 represents the men and women now working at the public utility who work daily to keep the lights on, and power to the state. These committed members have dedicated decades to training and learning the intricate industry of power generation. Our members at the public utility work under a collective bargaining agreement that provides a solid and stable career.

Eliminating the public utility from any new or renewed generation project eliminates the ability of transitioning this highly trained workforce to the new technologies and opportunities it presents. Careers and expertise built on decades of constant training will be lost if we cannot convert the skills and people to these new jobs.

We recommend amendments addressing the highly skilled workforce and the future of their jobs. It is beneficial to the state to transition work to these experts whose learning curve will be shorter, and proficiency multiplied.

We sincerely thank The Committee for their time, consideration, and dedication to the future of a renewable and reliable energy future.

Sincerely,

Leroy Chincio, Jr.
Business Manager and Financial Secretary
International Brotherhood of Electrical Workers Local 1260
700 Bishop Street, Suite 1600
Honolulu, HI 96813

Testimony to the Committees on Ways and Means
Tuesday, February 22, 2022
10:00 AM
VIA Video Conference and Conference Room 211 Hawaii State Capitol
SB 2513 SD1

Chair Dela Cruz, Vice Chair Keith-Agaran, and members of the committee,

Hawaii Clean Power Alliance (HCPA) **supports the intent** SB 2513 SD1 and **offers comments**. This bill requires the PUC to have electric utilities separately issue requests for proposals for firm energy generation and requests for proposals for intermittent renewable energy generation; prohibits the PUC from approving any new or renewed utility-owned generation project by a public utility or any new or renewed power purchase agreement for electricity generation with affiliated interest with a public utility; appropriates moneys.

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

Hawaii leads the nation with its commitment to 100% clean energy by 2045. With just over twenty years to achieve that, the state, the clean energy developers, the utilities, and the ratepayers cannot afford long delays, stifled competition, perceptions of conflict-of-interest, or missteps in bringing proposed projects to fruition. In a recent press release, the utility has indicated their intent to file a draft request for proposals (RFP) for firm renewable energy procurement for Oahu of 500-700 megawatts of energy from firm renewable generation resources as opposed to an "all resource" RFP. This provides a possible pathway to replace the current total firm capacity of 1,794.5 MW on Oahu. (https://www.hawaiianelectric.com/about-us/power-facts).

This bill addresses and corrects the chilling effect in competition that exists due to the many unknowns and uncertainties in the current RFP process. By requiring the separate RFPs, the market can respond accordingly, providing the lowest cost to ratepayers and the highest value to the grid. The proposed separate RFPs create the transparency needed at the time the RFP is issued, identifying factors such as grid reliability requirements and capacity duration.

These criteria determine the technologies that are most needed to satisfy those requirements at a given point in time. For example, perhaps early in the acquisition of renewables, the grid

could accept a high amount of input of renewables in intermittent surges (when the sun is up). This technology would have value on the grid. The process would also signal the markers when some technologies offered less value, i.e., the grid could not efficiently accept it and therefore renewable resources would need to have different attributes, like firm and flexible technologies that operate all day long.

Under the current procedures, it is difficult for the market to clearly understand what technologies are most needed at what time points. Market bidders are left to put forth proposals without the clarity to understand what's most needed, what would bring the greatest value, and what was most lacking in the grid's supply. This lack of transparency also leaves the market facing the real possibility that the proposal put forth offers technology that the grid simply can't handle, thus making it an exercise in futility for all involved.

This bill recognizes the cost, delays, lack of clarity, and adverse impact on work to reach the 2045 RPS goal and creates a clear playing field that benefits the electric utility, and the ratepayers. A strong, competitive market is essential if we are to meet our 2045 obligations and ensure that ratepayers have the clean, affordable, renewable energy they've been promised. This bill is critical to our shared success.

We want to note the amendments in the version SB2513 SD1 will result in practically eliminating intermittent resource procurement. It requires 96 hours (4 days) of storage. This is uneconomical with today's current technology and prices and therefore should be deleted.

In addition, the need for "separate" RFPs is the intent of the bill, however, the public utilities commission should have the discretion to determine what type of RFP best meets the needs that give rise to the future grid needs.

Also, in any RFP issued, having the utility articulate both the attributes of the project, such as the hours of continuous generation or hours of storage (capacity and generation) as well as the projected amount of generation needed in the subsequent 10 years after the RFP will assist in the RFP responses provide the lowest cost solution for the needs identified.

And we recommend that the word "inexhaustibly" be changed back to "continuously" because that implies the generation resource, not the facility. Resources such as geothermal, waste, biofuel crops and even the sun can be argued to be "exhaustible" at some point in the future, thereby knocking out consideration of these renewable generation sources. By substituting "continuously," it better describes the attributes of a generation facility, which is what this bill is referring to.

We therefore recommend the following amendments to the bill:

Pages 6 line 11-21, page 7 line 1-18

"§269- Requests for proposals. (a) The public utilities commission shall require each electric utility to issue requests for proposals for separate firm renewable energy generation and requests for proposals for intermittent renewable energy generation unless the public utilities commission expressly reasonably determines it is not in the public interest to do so. If the public utilities commission orders or allows any electric utility to issue a request for proposals for intermittent and firm generation together, the request for proposal shall clearly provide the valuation criteria for each attribute that the utility requires to maintain system reliability while meeting the renewable energy goals of the state. Further, the request for proposal shall include projections for future required renewable generation and all attributes for the following 10 years.

~~Each request for proposals for intermittent renewable energy generation shall include the capability of the renewable energy system to be offline for a period of up to ninety-six hours due to weather but still be able to deliver, while offline, renewable energy in an amount equal to the average kilowatt hours that was delivered in the ninety-six-hour period before the system went offline. Responses to intermittent renewable energy requests for proposals that do not demonstrate the~~

~~capability to meet or exceed this requirement shall not be approved by the public utilities commission.~~

(b) The public utilities commission shall have the discretion to determine what type of request for proposals best meets the needs that give rise to future requests for proposals.

(c) As used in this section:

"Firm renewable energy" means renewable energy that is constantly available and capable of being continuously ~~inexhaustibly~~ produced at its contracted capacity twenty-four hours per day, three hundred sixty-five days per year, subject only to routine maintenance and emergency repairs; ~~provided that burning trees and other wood products shall not be considered an acceptable generation source.~~

"Intermittent renewable energy" means renewable energy that does not meet the definition of "firm renewable energy"; ~~provided that burning trees and other wood products shall not be considered an acceptable generation source.~~

We ask the committee to pass this bill with these amendments.

Thank you for the opportunity to testify.

SB-2513-SD-1
Submitted on: 2/17/2022 5:39:55 PM
Testimony for WAM on 2/22/2022 10:00:00 AM

Submitted By	Organization	Testifier Position	Remote Testimony Requested
Shannon Rudolph	Individual	Oppose	No

Comments:

Strongly Oppose.

SB-2513-SD-1
Submitted on: 2/19/2022 3:14:05 PM
Testimony for WAM on 2/22/2022 10:00:00 AM

Submitted By	Organization	Testifier Position	Remote Testimony Requested
Tawn Keeney	Individual	Oppose	No

Comments:

Members of the Senate Ways and Means Committee,

It is the State of Hawaii's goal to transition electricity generation stations from sources emitting large amounts of greenhouse gas (by burning fossil fuels) to sources which will generate electricity without the critical environmental burden of greenhouse gas emissions. Within this context SB2513 SD1 makes little sense.

SB2513 originally contained a prohibition against self build of power generation facilities in the response to RFP from the Electric Utility. This was wisely stricken in the SD1 iteration.

Two amendments however are added, each of which needs explanation and consideration. The first is that within the definition of 'firm renewable energy' and 'intermittent renewable energy', "burning trees and other wood products will not be considered an acceptable generation source." The reasoning behind this amendment arises from consideration of the following:

1. It is well known that burning wood to generate electricity emits 1.5X more greenhouse gas per KWh electricity produced than does burning Coal.
2. Likewise burning wood generates 2.2X more GHG in CO2(e) emissions than burning oil and 3x more GHG than burning natural gas per KWh electricity generated.
3. Hu Honua, a proposed wood burning power station on the Big Island, in its 2019 'Greenhouse Gas Analysis' presented to the PUC confirmed that it would generate 1.95 tonsCO2(e) per MWh while the emissions from the fossil fuel stations that it would replace would generate 0.91 tons CO2(e) per KWh. Hu Honua would be emitting more than 2x as much GHG per KWh than the fossil fuel stations that it would replace.
4. Amazingly, testimony from DCCA's Public Advocate at the PUC stated that 58% of the electricity generation which Hu Honua would replace would be from other zero- emissions renewable sources (geothermal, wind or solar) and 42% would be from Fossil Fuels.
5. The DCCA Consumer Advocate in testimony to the PUC on September 17, 2021 stated, "... approval of the (Hu Honua) A&R PPA (Power Purchase Agreement) does not seem reasonable or in the public interest at this time." "Without additional justification, there are GHG emissions, environmental, health, and customer impact concerns that do not support a favorable ruling by the Commission."
6. A proposal has been forwarded to convert, after it's closure this year, the AES coal burning power station on Oahu to burn wood. In this AES scenario, for generation of the same amount of electricity as currently, AES' CO2(e) greenhouse gas emissions would rise from the current 1.7

million tons yearly to 2.7 million tons CO2(e) yearly.
7. The contention exists that regrowth of trees, once harvested, will re-sequester the carbon that was released by harvest. How long will this process take. A literature search finds only one source for these computations: the Government of Canada website, Bioenergy Greenhouse Gas Calculator: https://apps-scf-cfs.rncan.gc.ca/calc/en/bioenergy-calculator
Insertion of parameters for Hu Honua of 'fast growth trees', 50 kilometer average distance from forest to mill, comparison with coal shows that , for the example of Hu Honua, the 'best case scenario' is that burning chipped green trees for power give more accumulated Greenhouse Gases than burning coal for 70 years.
8. Would using wood as 'renewable energy' satisfy the desire for energy self sufficiency? Hu Honua has proposed a 7 year harvest cycle. Kamehameha Schools, Hu Honua's principal tree supplier has announced publicly that they will not regrow the trees on their 12,000 acres after the initial harvest. Parker Ranch has not committed to regrowing the trees on their 8,000 acres. The State of Hawaii has announced plans to plant or protect 100 Million trees by 2030. They will not sacrifice lands to supply a 7 year harvest cycle. It is presumed that Hu Honua will be importing wood pellets from the continental Americas or Oceania. Given that AES' need is for 200,000 to 300,000 acres of trees, as opposed to Hu Honua's 25,000 acres, this will not be sourced in the Islands. Thus energy 'self sufficiency is not a reason to consider 'bioenergy'.

The second amendment is as follows: Section 269 — Request for Proposals. …"Each request for proposals for intermittent renewable energy generation shall include the capability of the renewable energy system to be offline for a period of up to ninety-six hours due to weather but still be able to deliver, while offline, renewable energy in an amount equal to the average kilowatt hours that was delivered in the ninety-six-hour period before the system went offline."

This is exceedingly curious. In fact, within the context of the State renewable energy goals, this statement borders on nonsense. The author seems to have failed to construct a reasonable proposal, or at least express their thought. On the surface it would seem like this would prevent the PUC from approving any solar or wind installation. I am new to the Legislative process so I have no skills at looking 'beyond the surface', so I will only shrug my shoulders at this.

The State Energy Office has said that the need for 'firm' energy will not emerge until several of the oil burning stations are taken off line in the latter part of this decade or the 2030s. Battery storage capability is evolving quickly. By the time a substitute for oil is needed to provide firm 'backup', battery technology will have solved the problem. Until that time, the intermittent use of oil will be, by far, the cleanest available solution.

Mahalo for your consideration,
Tawn Keeney MD

SB-2513-SD-1
Submitted on: 2/19/2022 3:14:27 PM
Testimony for WAM on 2/22/2022 10:00:00 AM

Submitted By	Organization	Testifier Position	Remote Testimony Requested
Andrew Richard Kass	Individual	Oppose	No

Comments:

Dear Chair Chair Donovan M. Dela Cruz, Vice Chair Gilbert S.C. Keith-Agaran, and Committee on Ways and Means members,

I encourage you to oppose SB2513 SD1 because it places ridiculous requirements on intermittent renewable energy projects, essentially making them impossible because of their intermittent nature. Kauai has reached and exceeded its renewable energy goals so far through a variety of small renewable projects, most of which would fail these new criteria, but which in aggregate are productive and reliable.

Cui bono? Who would that benefit? To me it looks like corporate interests would like keep coal plants in business and add biomass plants with dubious environmental benefits.

Large fossil-fuel power plants are the old model that contributed to climate change. Hawaii doesn't need legislation to protect them from the myriad of small renewable projects that will help us transition to full renewable energy.

Mahalo,

Andrew R. Kass

SB-2513-SD-1
Submitted on: 2/21/2022 7:32:00 AM
Testimony for WAM on 2/22/2022 10:00:00 AM

Submitted By	Organization	Testifier Position	Remote Testimony Requested
Alice Kim	Individual	Support	No

Comments:

The State of Hawaii should support geothermal, an important firm renewable energy source. As developing geothermal energy faces huge barriers of entry in Hawaii, the State should simplify the process of submitting proposals involving geothermal energy.

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

Geothermal can provide baseload power, or the minimum amount of power that a utility company must generate for its customers. Baseload power not only ensures reliability of the electricity grid, but also reduces the cost of renewable energy. Unlike solar and wind energy, geothermal energy does not depend on favorable weather conditions and produces electricity continuously--24 hours a day, 7 days a week. Because geothermal energy is stable and predictable, it enables accurate energy planning and can meet the minimum level of demand on an electrical grid during a twenty-four-hour period.

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

The solar and wind energy industries became mainstream because they benefited from supportive government policies, and the State of Hawaii can do the same for geothermal.

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

Please support SB 2513 to make geothermal a viable local industry, ensure reliability of the State's electricity grid, and make the State's goal of reaching 100 percent renewable energy by 2045 more affordable.

SB-2513-SD-1
Submitted on: 2/21/2022 7:53:37 AM
Testimony for WAM on 2/22/2022 10:00:00 AM

Submitted By	Organization	Testifier Position	Remote Testimony Requested
Rilan Ferreira	Individual	Support	No

Comments:

I support

SB-2513-SD-1
Submitted on: 2/21/2022 8:05:16 AM
Testimony for WAM on 2/22/2022 10:00:00 AM

Submitted By	Organization	Testifier Position	Remote Testimony Requested
Peter Sternlicht	Individual	Support	No

Comments:

I support SB2513 SD1. However, I would add the following to the bill:

- A complete lifecycle carbon emission assessment threshold equal to or greater than 50g CO2/kWh using methodology approved or adopted by the National Renewable Energy Laboratory shall not result the utilization of biomass feedstock for energy production.
- The definition of "renewable source of energy" includes the forgoing lifecycle assessment language.

SB-2513-SD-1
Submitted on: 2/21/2022 8:29:57 AM
Testimony for WAM on 2/22/2022 10:00:00 AM

Submitted By	Organization	Testifier Position	Remote Testimony Requested
Debra Gavelek	Individual	Support	No

Comments:

To meet the state's 2045 goal of being 100% renewable energy, we need to have a diverse portfolio of firm and intermittent energies: biomass, geothermal, hydro, solar and wind. I support SB2513. Mahalo!

SB-2513-SD-1
Submitted on: 2/21/2022 8:50:48 AM
Testimony for WAM on 2/22/2022 10:00:00 AM

Submitted By	Organization	Testifier Position	Remote Testimony Requested
peter simmons	Individual	Oppose	No

Comments:

Aloha Esteemed Senators,

I write in opposition to SB2513 SD1.

Clearly while this is a well intentioned Bill it has at least one disasterous flaw: Using trees for energy is as old as cooking with fire. It makes no sense to eleimate a terrific renewable resource like trees and wood waste from consideration for Hawaii's sustainable energy future. Unwanted trees, wood waste from manufacturing should all be candidates for producing longterm sustainable energy.

Mahalo,

Peter D. Simmons

SB-2513-SD-1
Submitted on: 2/21/2022 8:52:12 AM
Testimony for WAM on 2/22/2022 10:00:00 AM

Submitted By	Organization	Testifier Position	Remote Testimony Requested
Sherryl Royce	Individual	Oppose	No

Comments:

Chair Baker, Chair Wakai, and Members of the Committees:

I am opposed to SB2513. Since solar and wind are dependent on the whims of nature, the requirements of this measure are too stringent. Please do not pass this bill in its present form

SB-2513-SD-1
Submitted on: 2/21/2022 9:51:31 AM
Testimony for WAM on 2/22/2022 10:00:00 AM

Submitted By	Organization	Testifier Position	Remote Testimony Requested
John Gavelek	Individual	Support	No

Comments:

As a retired utility lineman, I know the importance of reliable energy. I support Hawaii having a diverse portfolio of renewable energy sources: geothermal, biomass, hydro, solar and wind so we can always keep the lights on and avoid rolling blackouts. It is important we eliminate our dependance on fossil fuels ASAP.

SB-2513-SD-1
Submitted on: 2/21/2022 9:53:26 AM
Testimony for WAM on 2/22/2022 10:00:00 AM

Submitted By	Organization	Testifier Position	Remote Testimony Requested
Andrea Nandoskar	Individual	Oppose	No

Comments:

Strongly Oppose.
"Firm renewable energy" as currently defined in this
measure would include burning trees and other wood products which would result in unintended negative consequences to our environment and climate.

Mahalo for your consideration.

LATE

SB-2513-SD-1
Submitted on: 2/21/2022 10:06:48 AM
Testimony for WAM on 2/22/2022 10:00:00 AM

Submitted By	Organization	Testifier Position	Remote Testimony Requested
Donald Thomas	Individual	Support	No

Comments:

Hawaii's efforts to develop renewable energy and reduce our dependence on fossil fuels have focussed almost entirely on intermittent sources of renewable energy: wind and solar. Those intermittent sources that have been developed so far in Hawaii have had hundreds of millions of dollars in tax credis and subsidies while providing minimal backup reserves of as little as four to eight hours of reserve capacity to supply the grid after the intermittent source ceases to produce. We cannot support a modern society on an eight hour reserve - we must have a baseload source of power that can meet a necessary minimum demand continuously. If (when) we have a category 4 hurricane make landfall on our islands - as happened on Kauai - we cannot go for weeks or months without power: Kauai lost much of their transmission system to Iniki, but, even with the requirement to undergo a "black-start" where no conventional source of power was available to them to start their turbines, generation capacity was restored in a few days. If they had lost both the majority of their generation capacity as well as their distribution grid - as would be much more likely when relying on wind and solar - Kauai's recovery would have been substantially longer and more painful for their economy and their residents.

Hawaii's geothermal resources employ proven technology, can be produced at a lower cost, and is available more than 95% of the time. Recent research has shown that there is potential for geothermal resources on nearly all the major islands but funding for additional characterization of those resources is required before private investment will be willing to risk the tens of millions of dollars of investment that is required to fully define the economic viability of those prospective resource areas. This bill will provide the funding required to conduct the preliminary work that will attract investment that will allow the development of the required baseload capacity that Hawaii's renewal power demand needs.

Thank you for this opportunity to testify. The opinions expressed are mine alone and do not reflect the policy of any organization.

Donald Thomas

Hawaii Institute of Geophysics and Planetology

LATE

SB-2513-SD-1
Submitted on: 2/21/2022 11:34:13 AM
Testimony for WAM on 2/22/2022 10:00:00 AM

Submitted By	Organization	Testifier Position	Remote Testimony Requested
Sharon Geiken Westerberg	Individual	Oppose	No

Comments:

SB2513 SD1

As a concerned citizen I oppose this bill.

It sounds good at first reading this bill will not be good for the approval of any compeditive bid further delaying our progress towarad green energy.

"Each request for proposals for intermittent renewable energy generation shall include the capability of the renewable energy system to be offline for a period of up to ninety-six hours due to weather but still be able to deliver, while offline, renewable energy in an amount equal to the average kilowatt hours that was delivered in the ninety-six-hour period before the system went offline."

Mahalo

Sharon Geiken Westerberg

kahanastreet@yahoo.com

LATE

SB-2513-SD-1
Submitted on: 2/21/2022 11:58:21 AM
Testimony for WAM on 2/22/2022 10:00:00 AM

Submitted By	Organization	Testifier Position	Remote Testimony Requested
Michael Carion	Individual	Support	No

Comments:

I support this bill

LATE

SB-2513-SD-1
Submitted on: 2/21/2022 3:26:12 PM
Testimony for WAM on 2/22/2022 10:00:00 AM

Submitted By	Organization	Testifier Position	Remote Testimony Requested
Keola Gorospe	Individual	Support	No

Comments:

I am in favor of the renewable project and fully support the project especially the biomass oh the Hamakua Coast.

From: Jon Miyata
To: WAM Committee
Subject: SB2478, SB2483, SB2511, & SB2513
Date: Monday, February 21, 2022 7:40:04 AM
Attachments: JYM Testimony SB2478, 2483, 2511, 2513 (2-21-2022).pdf

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Aloha Chair and Committee Members,

Please see my testimony in support of the referenced bills attached.

Mahalo

Jon Y. Miyata
Director of Finance
Honua Ola Bioenergy
120 Pauahi Street, Suite 201
Hilo, Hawaii 96720
Ph. (808) 895-2240

From: sophia cabral-maikui
To: WAM Committee
Subject: Support of SB2513
Date: Sunday, February 20, 2022 9:04:29 PM

Aloha,

Please support SB2513.

Thank you!

Sophia Cabral-Maikui

From:	Dane Wicker
To:	Mary Deneen; Vanessa Arce
Subject:	Fw: SB 2513
Date:	Monday, February 21, 2022 9:41:47 AM

From: Alika Maikui Jr <amaikuijr@gmail.com>
Sent: Sunday, February 20, 2022 8:56 PM
To: WAM Committee <WAMCommittee@capitol.hawaii.gov>
Subject: SB 2513

I support this bill.

Mahalo!

Alika Maikui Jr.

Sent from my iPhone