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Testimony of
SCOTT J. GLENN, Chief Energy Officer

before the
HOUSE COMMITTEE ON ENERGY & ENVIRONMENTAL PROTECTION

Thursday, March 17, 2022
9:00 AM

State Capitol, Conference Room 325 & Videoconference

**COMMENTS
SB 2483, SD2
RELATING TO ENERGY.**

Chair Lowen, Vice Chair Marten, and Members of the Committee, the Hawai'i State Energy Office (HSEO) offers comments on SB 2483, SD2, which includes as an objective in energy-related planning for the State's facility systems that all new utility scale electricity generation projects be renewable; includes state policies that ensure short- and long-term provision of adequate, reasonably priced, and dependable renewable energy services, prioritizing the dispatch of renewable energy generation; updates the State's policies to ensure that all new utility scale electricity generation projects are renewable, prioritize renewable energy generation, and include the use of non-fossil fuel sources in the development or expansion of energy systems.

HSEO appreciates the changes made to the bill that addressed HSEO's concerns about inadvertently narrowing the scope of existing statutory language. With these changes, HSEO believes SB 2483, SD2 would be a welcome update to section 226-18, HRS.

HSEO defers to the appropriate agencies regarding Section 3 and the fiscal and administrative impacts of this measure.

Thank you for the opportunity to testify.



UNIVERSITY OF HAWAII SYSTEM

Legislative Testimony

Testimony Presented Before the
House Committee on Energy & Environmental Protection
Thursday, March 17, 2022 at 9:00 a.m.

By

Richard Rocheleau, Director
Hawai'i Natural Energy Institute

And

Michael Bruno, PhD
Provost

University of Hawai'i at Mānoa

SB 2483 SD2 – RELATING TO ENERGY

Chair Lowen, Vice Chair Marten, and members of the committee:

SB 2483 SD2 proposes amendments to HRS Section 226, Hawai'i State Planning Act; 226-18 Objectives and policies for facility systems—energy; with the objective to ensure that all new utility scale electricity generation projects shall be renewable. SB 2483 SD2 also appropriates funding for the Hawai'i Natural Energy Institute (HNEI) to evaluate the benefits and costs of dispatching renewable energy resources.

HNEI **supports the intent** of this bill to prioritize the dispatch of renewable generation, provided that its passage does not replace, or impact priorities as indicated in our BOR Approved Budget; but offers the following comments.

Section 2 a(4) would require that “all new utility scale electricity generation projects shall be renewable.” We believe that the intent of this language is to ensure maximum use of renewables and lower use of fossil fuels. We agree with this intent. However, based on modeling of the electrical grids, there can be significant benefits to the grid by the addition of smaller and more flexible internal combustion engines or combustion turbine units. While these units should be operated using renewable fuels whenever they are available; intermittent operation of these flexibly units using fossil fuels could, under some circumstances, improve grid reliability and allow faster retirement of aging oil units resulting in a net fossil fuel reduction. We recommend that this language in this section be amended so state “all new utility scale electricity generation projects shall be renewable capable”.

Section 3 of SB 2483 SD2 requires the HNEI to evaluate the benefits and costs of dispatching renewable energy sources. We believe that the costs and benefits of dispatching renewable energy sources can only be determined when their usage within the complete energy system is considered. We respectfully suggest that lines 9 and 10 of Section 3 be amended to say “for the Hawaii Natural Energy Institute to evaluate the

benefits and costs of dispatching renewable energy sources considering the context of ongoing state energy planning efforts.

Section 3 also appropriates funds from the Energy Systems Development Special Fund (ESDSF) for the requested study. HNEI has a sufficient balance of funding in the ESDSF to complete the requested work and does not believe a separate appropriation is necessary.

Thank you for the opportunity to provide this testimony on SB 2483 SD2.



**Hawaiian
Electric**

**TESTIMONY BEFORE THE HOUSE COMMITTEE ON
ENERGY & ENVIRONMENTAL PROTECTION**

S.B. 2483 SD2

Relating to Energy

Thursday, March 17, 2022

09:00 am, Agenda Item #9

State Capitol, Conference Room 325 & Videoconference

Marc Asano

Director, Integrated Grid Planning

Hawaiian Electric

Chair Lowen, Vice Chair Marten, and Members of the Committees:

My name is Marc Asano and I am testifying on behalf of Hawaiian Electric Company **in opposition to S.B. 2483 SD2**, Relating to Energy, **with comments in support to Section 3**.

S.B. 2483 SD2 amends Hawaii Revised Statutes, Section 226-18 to ensure that all new utility scale electric generation projects are renewable, new supply-side resources use non-fossil fuel sources, ensures short- and long- term provision of adequate, reasonably priced, and dependable renewable energy services, and prioritizes the dispatch of renewable energy generation. S.B. 2483 SD2 also appropriates moneys for Hawaii Natural Energy Institute (HNEI) to study the costs of dispatching renewable energy sources.

While we have concerns with and oppose other sections of S.B. 2483 SD2, Hawaiian Electric is committed to reducing carbon emissions in 2030 by as much as 70 percent below 2005 levels. Our ambitious Climate Change Action Plan accomplishes many of the objectives of this bill without mandates that can have unintended consequences. Over the next eight years our plan anticipates a steady pace of cost-

effective renewable energy resources coming online to reduce the use of fossil fuels to generate electricity. Key elements of the Company's 2030 plan include:

- Shutting down the state's last coal plant in 2022;
- Adding nearly 50,000 rooftop solar systems to the 90,000 now online;
- Retiring at least 6 fossil-fueled generating units and significantly reducing the use of others as new renewable resources come online;
- Adding renewable energy projects capable of generating a total of at least 1 gigawatt, including shared solar (community-based renewable energy);
- Using more grid-scale and customer-owned energy storage;
- Expanding geothermal resources; and
- Creating innovative programs that provide customers incentives for using clean, lower-cost energy at certain times of the day and using less fossil-fueled energy at night.

By 2030, Hawaiian Electric's renewable portfolio standard is targeted to exceed 70 percent, with renewable resources available to provide close to 100 percent of the electricity generated on Hawaii Island and in Maui County. Additionally, Hawaii Island Maui County achieved 60 percent and 50 percent renewable portfolio standard respectively in 2021. We will continue to make significant gains in reducing fossil fuel usage in the coming years. Therefore, we believe our continued actions to meet state policy goals make this bill unnecessary.

Hawaiian Electric opposes Section 2 of the bill as we are concerned with the significant burden electricity bills may have on local families as a result of policies to mandate use of renewable fuels and prioritizing renewable dispatch over other energy options. Today, all resources on the system are generally dispatched economically to

the benefit of customers. For example, a renewable fuel such as biodiesel could cost roughly twice that of diesel. Therefore, customers would see significant increases to their electricity bills if Hawaiian Electric were required to dispatch its biodiesel units ahead of other alternatives, even with the suspension of purchases of Russian crude oil. This in effect, places an especially undue burden on underserved communities that are less likely to have the means and opportunity to invest in rooftop solar and energy efficiency. Moreover, amendments such as prioritizing renewable dispatch today would conflict with other parts of H.R.S. §226-18 that state a desire for short- and long-term “reasonably priced” and “least-cost energy supply option”. Hawaiian Electric would also be obligated to re-negotiate existing power purchase agreements in order to comply with amendments being proposed.

Section 2 will also have the effect of non-competitive pricing for new renewable projects. Hawaiian Electric uses a competitive procurement process to seek the lowest cost renewable energy for customers. However, independent producers will have less incentive to submit competitive offers knowing that their project must be dispatched ahead of lower cost non-renewable alternatives during the transition to 100 percent renewables. Economic dispatch of a diverse set of generating resources, helps to ensure that independent producers exercise discipline in developing project proposals.

Further, we do not think this bill is necessary at this time as Hawaiian Electric is working to issue a competitive procurement for firm renewable generation within the next few months, where it expects to determine the firm renewable energy options available today and assess the benefits and costs compared to status quo. Hawaiian Electric will need to carefully weigh both qualitative and quantitative benefits against potentially higher costs firm renewable generation options.

To address our concerns and the intent of this bill, Hawaiian Electric suggests that funding, research, and development related to renewable energy and statewide decarbonization focus on solutions to bring cost parity to locally produced low carbon, renewable fuels, and other renewable technologies such as geothermal, including new geothermal closed loop technology, and renewable hydrogen as we supported in SB 2283, among others.

Hawaiian Electric respectfully submits that Section 2 of this bill, should not be enacted until Section 3 is completed, which requires HNEI to perform analysis to evaluate the effects of the policy mandates proposed in Section 2.

Accordingly, Hawaiian Electric opposes S.B. 2483 SD1, with comments in support to Section 3. Thank you for this opportunity to testify.

Tawhiri Power LLC



TESTIMONY OF TAWHIRI POWER LLC
ON SB 2483, SD2 BEFORE THE HOUSE COMMITTEE ON
ENERGY & ENVIRONMENTAL PROTECTION
THURSDAY, MARCH 17, 2022 AT 9 a.m.

TO THE HONORABLE CHAIR LOWEN, VICE CHAIR MARTEN, and MEMBERS OF
THE COMMITTEES:

Tawhiri Power LLC (“TPL”)¹, as a strong supporter of renewable energy, supports the intent of this bill to encourage the use of renewable energy over fossil fuels and that the least cost option be given consideration when reviewing renewable energy projects.

Thank you for the opportunity to testify.

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.



**Testimony to the Committee on Energy & Environmental Protection
Thursday, March 17, 2022
9:00 AM
Conference Room 325, Hawaii State Capitol & VIA Video Conference
SB 2483 SD2**

Chair Lowen, Vice Chair Marten, and members of the committee,

Hawaii Clean Power Alliance (HCPA) **supports** SB 2483 SD2, which includes an objective in energy-related planning for the State's facility systems that all new utility scale electricity generation projects be renewable; includes state policies that ensure short-and long-term provision of adequate, reasonably priced, and dependable renewable energy services, prioritizing the dispatch of renewable energy generation; updates the State's policies to ensure that all new utility scale electricity generation, and include the use of non-fossil fuel sources in the development or expansion of energy systems; appropriates money.

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.

In Hawaii, the electric utility has sole discretion over what power is dispatched onto the grid, while in other jurisdictions across the mainland, that discretion sits with an Independent Systems Operator (ISO), thus ensuring an unbiased mix of energy is dispatched and any perceptions of conflict of interest are avoided. Currently in Hawaii, there is generation of renewable energy available for the grid, but it is being curtailed by the utility, wasting that valuable energy in favor of fossil fuels.

Due to a flaw in the RPS statute, fossil fuels remain a viable fuel source, but given our goal to decarbonize, it simply makes sense to prioritize renewable energy before resorting to fossil fuels. This bill recognizes that priority and makes renewable energy our future standard.

To achieve our shared decarbonization goals, the planning and policies reflected in legislative and regulatory proceedings must all reflect renewable priorities. This bill allows for that, bringing these efforts onto common ground, which is essential if our 2045 goal is to be achieved.

In Hawaiian Electric Company Key Performance Metrics, (<https://www.hawaiianelectric.com/about-us/key-performance-metrics/renewable-energy>), it is reported that there was a 38.4% RPS compliance in Q4/2021. However, the curtailed energy by Island in any given quarter since 2020 ranges anywhere from .30% up to 20.46%. That is wasted renewable energy. This bill will help to ensure more available renewable energy be used on the grid to displace fossil fuel.

Transparency in this sector is more crucial than ever, with renewable energy generators bringing new fuel to the market while the utility continues to have exclusive control over the grid's output. We appreciate the utility's focus - and truly, the focus of all in the sector - to bring affordable and reliable energy to Hawaii's ratepayers, which is why we also appreciate the bill's recognition that the utility be able to "consider the least-cost energy supply option."

We urge the committee to pass SB 2483 SD2

Thank you for the opportunity to testify.

SB-2483-SD-2

Submitted on: 3/14/2022 6:32:37 PM

Testimony for EEP on 3/17/2022 9:00:00 AM

Submitted By	Organization	Testifier Position	Testify
Douglas Perrine	Individual	Support	Written Testimony Only

Comments:

Moving to renewable energy sources for power generation is essential to our future and cannot be delayed. Please advance SB2483.

SB-2483-SD-2

Submitted on: 3/15/2022 2:43:27 PM

Testimony for EEP on 3/17/2022 9:00:00 AM

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

Comments:

I support the state's goal of all renewable energy production by 2045. We need to get off of fossil fuels and this bill is part of the program to do so. Thank you

SB-2483-SD-2

Submitted on: 3/15/2022 3:26:44 PM

Testimony for EEP on 3/17/2022 9:00:00 AM

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

Comments:

I support this bill as Hawaii needs to get off of fossil fuels and transition into creating its own renewable energy. The high cost of foreign-sourced fuels and their transportation continue to soar, especially in the wake of the ban on Russian oil. We must create our own sustainable future as soon as possible. Thank you!

SB-2483-SD-2

Submitted on: 3/15/2022 3:35:22 PM

Testimony for EEP on 3/17/2022 9:00:00 AM

Submitted By	Organization	Testifier Position	Testify
Andrea Quinn	Individual	Support	Written Testimony Only

Comments:

Dear Honorable Committee Members:

Please support SB2483.

Thank you for the opportunity to present my testimony.

Andrea Quinn

Kihei, Maui

SB-2483-SD-2

Submitted on: 3/15/2022 4:18:41 PM

Testimony for EEP on 3/17/2022 9:00:00 AM

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

Comments:

Planning for future energy projects must include renewable energy to get away from energy dependance on fossil fuels and the cost of fossil fuels to our pocket books and the environment!

SB-2483-SD-2

Submitted on: 3/15/2022 4:35:27 PM

Testimony for EEP on 3/17/2022 9:00:00 AM

Submitted By	Organization	Testifier Position	Testify
Lydia Hoepfner	Individual	Support	Written Testimony Only

Comments:

The State of Hawaii needs to get off the imported oil and the rising cost of oil and use renewable energy created by our own natural resources instead.

With the rising cost of oil, this bill makes so much sense.

It can be done! If we can't figure out how, then we need to figure out why and tell residents.

Vote YES for the island residents.

SB-2483-SD-2

Submitted on: 3/15/2022 5:18:54 PM

Testimony for EEP on 3/17/2022 9:00:00 AM

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

Comments:

All new energy projects in Hawaii should include renewable energy. This will help create good local jobs and preserve the environment.

SB-2483-SD-2

Submitted on: 3/15/2022 10:22:32 PM

Testimony for EEP on 3/17/2022 9:00:00 AM

Submitted By	Organization	Testifier Position	Testify
Thomas H. Daniel	Individual	Support	Written Testimony Only

Comments:

This bill Includes as an objective in energy-related planning for the State's facility systems that all new utility scale electricity generation projects be renewable.

Hawaii is wasting clean renewable energy and using fossil fuels, when the renewable energy is available. That is a waste.

We need to get off of imported oil with its rising cost and use renewable energy created by our own natural resources instead.

With the rising cost of oil, this bill makes so much sense.

We have wasted renewable energy that is going nowhere. If we are prioritizing eliminating emissions, we should be using renewable energy first.

SB-2483-SD-2

Submitted on: 3/15/2022 11:09:32 PM

Testimony for EEP on 3/17/2022 9:00:00 AM

Submitted By	Organization	Testifier Position	Testify
Cat Mikkelsen	Individual	Support	Written Testimony Only

Comments:

This is a great idea. I love the idea that all fuel must be renewable. We must get out of fossil fuel and this is one of the ways that it will happen.

SB-2483-SD-2

Submitted on: 3/16/2022 4:23:47 AM

Testimony for EEP on 3/17/2022 9:00:00 AM

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

Comments:

I support bill SB2483

SB-2483-SD-2

Submitted on: 3/16/2022 7:18:30 AM

Testimony for EEP on 3/17/2022 9:00:00 AM

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

Comments:

I support

SB-2483-SD-2

Submitted on: 3/16/2022 7:21:01 AM

Testimony for EEP on 3/17/2022 9:00:00 AM

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

Comments:

We need to get off of imported oil and use our onw natural resources instead.

SB-2483-SD-2

Submitted on: 3/16/2022 7:25:20 AM

Testimony for EEP on 3/17/2022 9:00:00 AM

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

Comments:

Hawaii is wasting clean renewable energy and using fossil fuels. We have renewable energy available.

SB-2483-SD-2

Submitted on: 3/16/2022 7:27:03 AM

Testimony for EEP on 3/17/2022 9:00:00 AM

Submitted By	Organization	Testifier Position	Testify
Suterra Soares	Individual	Support	Written Testimony Only

Comments:

Aloha,

I support this bill.

SB-2483-SD-2

Submitted on: 3/16/2022 7:28:48 AM

Testimony for EEP on 3/17/2022 9:00:00 AM

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

Comments:

Let's get off of using imported oil and use our renewable energy.

SB-2483-SD-2

Submitted on: 3/16/2022 7:30:48 AM

Testimony for EEP on 3/17/2022 9:00:00 AM

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

Comments:

Please support.

SB-2483-SD-2

Submitted on: 3/16/2022 10:19:38 AM

Testimony for EEP on 3/17/2022 9:00:00 AM

Submitted By	Organization	Testifier Position	Testify
Rikey Tobosa	Individual	Support	Written Testimony Only

Comments:

i support