DAVID Y. IGE
GOVERNOR

JOSH GREEN
LT. GOVERNOR

STATE OF HAWAII
OFFICE OF THE DIRECTOR
DEPARTMENT OF COMMERCE AND CONSUMER AFFAIRS
335 MERCHANT STREET, ROOM 310
P.O. BOX 541
HONOLULU, HAWAII 96809
Phone Number: 586-2850
Fax Number: 586-2856
cca.hawaii.gov

CATHERINE P. AWAKUNI COLÓN
DIRECTOR

JO ANN M. UCHIDA TAKEUCHI
DEPUTY DIRECTOR

Testimony of the Department of Commerce and Consumer Affairs

Before the
House Committee on Energy & Environmental Protection
Tuesday, January 28, 2020
8:30 a.m.
State Capitol, Conference Room 325

On the following measure:
H.B. 1864, RELATING TO RENEWABLE ENERGY

Chair Lowen 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 supports this bill.

The purposes of this bill are to amend: (1) the definition of renewable portfolio standard to be a percentage of electrical energy generation, rather than sales; and (2) the renewable portfolio standard interim goals for 2030 and 2040 to accelerate the adoption of renewable energy by the electric utility companies.

The Department continues to support the State's goal of 100% renewable energy on its electric grids by 2045, and so the Department supports the proposal to modify the existing Renewable Portfolio Standards (RPS) calculation in Hawaii Revised Statutes (HRS) section 269-91 by replacing "sales" with "generation" in the calculation, effective July 1, 2020. This modification will eliminate the existing "loophole" that could allow the State to achieve a 100% RPS but still have a significant contribution from fossil-fueled

generation sources, as well as allow for more than 100% of generation from renewable energy.

If the RPS calculation is modified, the corrected calculation will automatically require more grid-connected renewable energy than is currently required. In addition, pursuant to HRS section 269-95, the Public Utilities Commission (Commission) is already tasked to evaluate the RPS every five years to determine whether, using the best information available at the time, the RPS can be cost-effectively achieved. The Commission can also modify the goals as appropriate. Given the uncertainty of various factors, such as future technology and its costs, land availability, and grid security and resiliency concerns, it may be prudent to rely upon the results of this recurring study to determine future modifications to RPS interim goals.

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 F ENERGY OFFICER

235 South Beretania Street, 5TH Floor, Honolulu, HI 96813 | energy.hawaii.gov

(808) 587-3807

Testimony of
SCOTT J. GLENN, Chief Energy Officer

before the
HOUSE COMMITTEE ON ENERGY & ENVIRONMENTAL PROTECTION
Tuesday, January 28, 2020
8:30 AM
State Capitol, Conference Room 325

In SUPPORT of
HB 1864
RELATING TO RENEWABLE ENERGY.

Chair Lowen, Vice Chair Wildberger, and members of the Committee. The Hawaii State Energy Office supports, with amendments, HB 1864, which proposes to make the following changes to Hawaii's Renewable Portfolio Standards law: first, it would revise the method of calculating the renewable energy percentage, so that generation rather than sales is in the denominator of the calculation, thus increasing the required amount of renewable energy on the system by an amount equivalent to the renewable energy produced by utility customers; second, it would further increase the standard in the year 2030 from forty percent to sixty-five percent; and third, it would increase the standard in the year 2040 from seventy to eight-five percent.

Importantly, however, the bill allows the law's existing provisions for penalties, incentives, and necessary adjustment by the Public Utilities Commission to remain in place. We agree that there are uncertainties regarding cost, technology, and specific events or circumstances. But that must not hold us back from efforts to achieve the transition to renewable energy, as stated in the Hawaii Revised Statutes, Section 225P, "as quickly as practicable."

We recommend that "its net electricity generation" be revised simply to "generation."[1] We have provided an attachment with language to that effect with our testimony.

We acknowledge that there is a possibility that, since the electric utilities do not control the operation of fossil-fueled systems on their customers' properties (i.e. backup generators or combined heat and power systems), assumptions or monitoring may be required. To provide policy-makers and regulators with information on any significant trend relating to grid defection, we recommend that overall numbers of customer disconnections be provided on an annual, non-confidential basis, to the Public Utilities Commission as part of the utilities' renewable portfolio standards reporting. Language to this effect is attached to our testimony.

---

[1] There are three types of electricity generation: utility-owned generation, independent power producer generation, and customer-sited generation. The phrase "its net electricity generation," therefore, could be interpreted to include only generation units owned by the utility. The term "generation" is inclusive of all three types of electricity generation, and therefore more consistent with the stated intent of the bill, "total electrical energy generation" (page 2 lines 6-7).

Finally, since generation and efficiency have been treated separately since 2015, it is recommended that, unless it is necessary to retain them for historical purposes, any currently unused (i.e. obsolete) definitions involving the consideration of efficiency as a renewable resource be removed, to enhance clarity and readability of the statute. The suggested language is attached to our testimony.

Thank you for the opportunity to testify.

ATTACHMENT 1 TO TESTIMONY

Proposed language for Section 2 of HB 1864:

SECTION 2. Section 269-91, Hawaii Revised Statutes, is amended to read as follows:

"**§269-91** [**[**]**Definitions.**[**]**] For the purposes of this part:

"Biofuels" means liquid or gaseous fuels produced from organic sources such as biomass crops, agricultural residues and oil crops, such as palm oil, canola oil, soybean oil, waste cooking oil, grease, and food wastes, animal residues and wastes, and sewage and landfill wastes.

"Cost-effective" means the ability to produce or purchase electric energy or firm capacity, or both, from renewable energy resources at or below avoided costs or as the commission otherwise determines to be just and reasonable consistent with the methodology set by the public utilities commission in accordance with section 269-27.2.

"Electric utility company" means a public utility as defined under section 269-1, for the production, conveyance, transmission, delivery, or furnishing of power.

"Renewable electrical energy" means[~~÷~~

~~(1) Electrical energy generated using renewable energy as the source, and beginning January 1, 2015, includes customer-sited, grid-connected renewable energy generation; and~~

~~(2) Electrical energy savings brought about by:~~

~~(A) The use of renewable displacement or off-set technologies, including solar water heating, sea-water air-conditioning district cooling systems, solar air-conditioning, and customer-sited, grid-connected renewable energy systems; provided that, beginning January 1, 2015, electrical energy savings shall not include customer-sited, grid-connected renewable-energy systems; or~~

~~(B) The use of energy efficiency technologies, including heat pump water heating, ice storage, ratepayer-funded energy efficiency programs, and use of rejected heat~~

~~from co-generation and combined heat and power systems, excluding fossil-fueled qualifying facilities that sell electricity to electric utility companies and central station power projects.]~~

electrical energy generated using renewable energy as the source.

"Renewable energy" means energy generated or produced using the following sources:

(1) Wind;

(2) The sun;

(3) Falling water;

(4) Biogas, including landfill and sewage-based digester gas;

(5) Geothermal;

(6) Ocean water, currents, and waves, including ocean thermal energy conversion;

(7) Biomass, including biomass crops, agricultural and animal residues and wastes, and municipal solid waste and other solid waste;

(8) Biofuels; and

(9) Hydrogen produced from renewable energy sources.

"Renewable portfolio standard" means the percentage of electrical energy [~~sales that is represented by renewable electrical energy.~~]<u>that is renewable electrical energy.</u>"

ATTACHMENT 2 TO TESTIMONY

Proposed language for Section 3 of HB 1864:

SECTION 3. Section 269-92, Hawaii Revised Statutes, is amended to read as follows:

"**§269-92 Renewable portfolio standards.** (a) Each electric utility company that sells electricity for consumption in the State shall establish a renewable portfolio standard of:

[~~(1) Ten per cent of its net electricity sales by December 31, 2010;~~

~~(2) Fifteen per cent of its net electricity sales by December 31, 2015;~~

~~(3)~~](1) Thirty per cent of its net electricity sales by December 31, 2020;

[~~(4)~~](2) [~~Forty~~]Sixty-five per cent of [~~its net electricity sales~~] generation by December 31, 2030;

[~~(5)~~](3) [~~Seventy~~]Eighty-five per cent of [~~its net electricity sales~~] generation by December 31, 2040; and

[~~(6)~~](4) One hundred per cent of [~~its net electricity sales~~] generation by December 31, 2045.

(b) The public utilities commission may establish standards for each electric utility company that prescribe [~~what~~] the portion of the renewable portfolio standards that shall be met by specific types of renewable energy resources; provided that:

~~[(1) Prior to January 1, 2015, at least fifty per cent of the renewable portfolio standards shall be met by electrical energy generated using renewable energy as the source, and after December 31, 2014, the entire renewable portfolio standard shall be met by electrical generation from renewable energy sources;~~

~~(2) Beginning January 1, 2015, electrical energy savings shall not count toward renewable energy portfolio standards;~~]

[~~(3)~~](1) Where electrical energy is generated [~~or displaced~~] by a combination of renewable and nonrenewable means, the proportion attributable to the renewable means shall be credited as renewable energy; and

[~~(4)~~](2) Where fossil and renewable fuels are co-fired in the same generating unit, the unit shall be considered to generate renewable electrical energy (electricity) in direct proportion to the percentage of the total heat input value represented by the heat input value of the renewable fuels.

(c) If the public utilities commission determines that an electric utility company failed to meet the renewable portfolio standard, after a hearing in accordance with chapter 91, the utility shall be subject to penalties to be established by the public utilities commission; provided that if the commission determines that the electric utility company is unable to meet the renewable portfolio standards [~~due to~~] because of reasons beyond the reasonable control of an electric utility, as set forth in subsection (d), the commission, in its discretion, may waive in whole or in part any otherwise applicable penalties.

(d) Events or circumstances that are [~~outside of~~] beyond an electric utility company's reasonable control may include, to the extent the event or circumstance could not be reasonably foreseen and ameliorated:

(1) Weather-related damage;

(2) Natural disasters;

(3) Mechanical or resource failure;

(4) Failure of renewable electrical energy producers to meet contractual obligations to the electric utility company;

(5) Labor strikes or lockouts;

(6) Actions of governmental authorities that adversely affect the generation, transmission, or distribution of renewable electrical energy under contract to an electric utility company;

(7) Inability to acquire sufficient renewable electrical energy due to lapsing of tax credits related to renewable energy development;

(8) Inability to obtain permits or land use approvals for renewable electrical energy projects;

(9) Inability to acquire sufficient cost-effective renewable electrical energy;

(10) Inability to acquire sufficient renewable electrical energy to meet the renewable portfolio standard goals beyond 2030 in a manner that is beneficial to Hawaii's economy in relation to comparable fossil fuel resources;

(11) Substantial limitations, restrictions, or prohibitions on utility renewable electrical energy projects; and

(12) Other events and circumstances of a similar nature[~~.~~] that could not be reasonably foreseen and ameliorated.

(e) Each electric utility shall track and report to the commission, on an annual basis, data and trends regarding customer retention or attrition."

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

TO THE
HOUSE COMMITTEE ON
ENERGY AND ENVIRONMENTAL PROTECTION

January 28, 2020
8:30 a.m.

Chair Lowen and Members of the Committee:

MEASURE: H.B. No. 1864
TITLE: RELATING TO RENEWABLE ENERGY.

DESCRIPTION: Amends the definition of renewable portfolio standard to be a percentage of electrical energy generation, rather than sales. Amends the renewable portfolio standard interim goals for 2030 and 2040 to accelerate the adoption of renewable energy.

POSITION:

The Public Utilities Commission offers the following comments for consideration.

COMMENTS:

In accordance with Chapter 269-95, Hawaii Revised Statutes, the Commission submitted a *Report to the 2019 Legislature on Hawaii's Renewable Portfolio Standards* in December 2018 ("RPS Report"). The RPS Report demonstrates that based on currently known renewable projects and projects anticipated from the HECO Companies' recently completed Phase 1 renewable energy competitive solicitation, 47% of HECO Companies' sales could come from renewable sources in 2030.

The Commission notes that expressing RPS requirements in terms of electricity generation rather than utility sales has the effect of making achievement of the RPS targets more challenging, since under the current definition, customer-sited renewable generation is counted as generation and also reduces utility sales, boosting RPS achievement.

Regarding the proposed amendments to the RPS goals to increase the renewable energy target in 2030 from 40% to 65%, the HECO Companies are currently conducting competitive solicitations for additional renewable energy and energy storage, including the recently completed Phase 1 and currently active Phase 2 requests for proposals. The Phase 2 solicitation is expected to produce several additional renewable projects; however, there is still significant uncertainty about the extent to which those projects will be selected, come online, and contribute to the state's RPS achievement. In terms of the timeline, the HECO Companies expect to select a final award group in May 2020, with contract negotiations and applications for PUC approval to continue into 2021.

Therefore, while the HECO Companies are on pace to exceed the current 40% goal for 2030, meeting the proposed 65% target, on the basis of generation as opposed to sales, would require a significant increase from the current trajectory, including successfully completing additional future solicitations beyond the Phase 2 process, in a relatively compressed timeframe. The Commission is assessing the potential contributions of the Phase 2 solicitation to RPS achievement under a 65% target in 2030 (based on generation instead of sales) will share the results of that assessment as soon as possible.

Finally, in the RPS Report, the Commission stated that effective grid integration and management practices for Hawaii's independent electrical systems with high levels of renewable generation is an area under continual study. Recent experience suggests that continued research and development of grid integration technologies and grid management solutions will be necessary for reliable operation of the grid as the State progresses towards the longer-term RPS goals.

Thank you for the opportunity to testify on this measure.

ELEMENTAL
EXCELERATOR

Written Statement of Elemental Excelerator
before the House Committee on Energy and Environmental Protection:
January 28, 2020

In consideration of HB 1864
RELATING TO RENEWABLE ENERGY

Aloha Chair Lowen, Vice Chair Wildberger, and Members of the House Committee on Energy and Environmental Protection:

Elemental Excelerator **submits support** for HB 1864, which:

1. Amends the definition of renewable portfolio standard to be a percentage of electrical energy generation, rather than sales; and
2. Amends the renewable portfolio standard interim goals for 2030 and 2040 to accelerate the adoption of renewable energy.

Elemental Excelerator is a Honolulu-based non-profit organization that supports climate positive startup companies that are helping solve Hawai'i's most urgent environmental problems. Each year, we select 15-20 companies annually that best fit our mission and fund each company up to $1 million. To date, we have awarded $36 million to 99 companies resulting in over fifty demonstration projects in Hawai'i & the Asia Pacific.

In April 2018, Elemental Excelerator commissioned a study entitled *Transcending Oil: Hawai'i's Path to a Clean Energy Economy.* The study found that in Hawai'i, transitioning to renewable energy is cheaper than sticking with oil. The faster we go, the cheaper it will be. Our clean energy goals and accelerated targets necessitate leadership across state and local government, private institutions, and community organizations, and requires early and frequent community engagement.

We support the amended definition of the renewable portfolio standard (RPS) which calculates the renewable electrical energy generation divided by the total electrical energy generation. The amended definition results in two benefits:

1. **It reflects the intent of Act 97**, section 969-92 of Hawai'i Revised Statutes, which aims for the renewable portfolio standard to result in 100% renewable energy generation by 2045.[1]
2. **This calculation removes confusion and increases public confidence** to achieve the State of Hawai'i's RPS goals. If you calculate the renewable portfolio standard by the percentage of electrical energy sales that is represented by renewable electrical energy, the RPS could equal 100 percent while the electric grid continues to be heavily reliant on fossil fuels.

We support accelerating goals of the 2030 and 2040 RPS to sixty-five percent and eighty-five percent respectively. Accelerating our RPS is the right thing to do because:

1. **It is more cost-effective:** Transcending Oil found that renewables are more cost effective and the most cost-effective path will lead us to up to 84% renewable energy by 2030 and up to 95% by 2040.[2] Updating interim targets for the RPS from 40% to 65% by 2030 and

from 70% to 85% by 2040 tails the projected cost-effective path and lies conservatively within Hawaiian Electric Companies' Power Supply Improvement Plan, which states that *"under multiple longer-term scenarios, our RPS can be at least 72 percent by 2030 and reach at least 100 percent by 2040, ahead of the 2045 deadline."*[3]

2. **It will enhance our economy:** Compared to meeting the current RPS of 40% renewable energy by 2030, Transcending Oil found that advancing targets to 84% by 2030 create up to 3,500 additional jobs per year that pay $3-7 more per hour than Hawai'i's $20 median wage and drive nearly $2.8 billion in additional investment by accelerating its clean energy transformation.[4]

Mahalo for the opportunity to provide testimony on this legislation.

Sincerely,

Aki Marceau
Managing Director, Policy & Community

---

[1] Act 97, section 969-92 of Hawai'i Revised Statutes,
[2] Larsen, J., Mohan, S., Herndon, W., Marsters, P., & Pitt, H. (2018, May 01). Transcending Oil: Hawaii's Path to a Clean Energy Economy, p.22, Retrieved from https://rhg.com/research/transcending-oil-hawaiis-path-to-a-clean-energy-economy/
[3] Hawaiian Electric Companies' 2016 Power Supply Improvement Plan (PSIP). (2016, December). Retrieved from https://www.hawaiianelectric.com/documents/clean_energy_hawaii/grid_modernization/psip_executive_summary_20161223.pdf
[4] Transcending Oil, p.3.

HB-1864
Submitted on: 1/27/2020 4:26:17 AM
Testimony for EEP on 1/28/2020 8:30:00 AM

Submitted By	Organization	Testifier Position	Present at Hearing
Ted Bohlen	Climate Protectors Coalition	Support	No

Comments:

SIERRA CLUB OF HAWAIʻI

HOUSE COMMITTEE ON ENERGY AND ENVIRONMENTAL PROTECTION

January 28, 2020 8:30 AM Room 325

In SUPPORT of HB1864: Relating to Renewable Energy

Aloha Chair Lowen, Vice Chair Wildberger, and members of the committee,

On behalf of our 20,000 members and supporters, the Sierra Club of Hawaiʻi **supports HB1864**, which fixes the calculation of Hawaiʻi's renewable portfolio standards and accelerates the state's clean energy goals for 2030 and 2040.

HRS section 269-92 mandates a 100% renewable energy portfolio standard (RPS) by 2045. This means that the State must transition away from imported fuels and toward renewable energy sources, preferably local, to provide clean and secure electricity. It is important that there is no overestimation in the delivery of this goal and that there are accurate measures in place to achieve it. HB1864 ensures this success in two ways:

1. This bill provides a simple, yet necessary correction to how the RPS is calculated by changing reference to energy "sales" to energy "generation", helping to correct the overestimation of renewable energy produced in the state and also accounting for energy losses that occur from energy transmission.
2. This bill increases the interim renewable energy targets to 65% by 2030 and 80% by 2040 to encourage the acceleration of renewable energy for electric utilities.

The 2018 "Transcending Oil" report, which was commissioned by Elemental Excelerator and completed by Rhodium Group, concluded that accelerating Hawaiʻi's transition to clean energy would be cheaper for Hawaiʻi ratepayers than keeping existing renewable portfolio standards. The Hawaiian Electric Companies' Power Supply Improvement Plan, states that "under multiple longer-term scenarios, our RPS can be at least 72 percent by 2030 and reach at least 100 percent by 2040, ahead of the 2045 deadline." The Hawaiian Electric Company estimates that if all of its current RFP's (900MW in Phase 2) for utility-scale renewable energy projects are approved, the utility would reach 75% renewable by the year 2025. On certain days, the island of Kauaʻi is already achieving 100% clean electricity. In light of Hawaiʻi's progress, it seems reasonable to adjust the interim RPS targets for 2030 and 2040.

Mahalo for supporting HB1864,

Jodi Malinoski

Jodi Malinoski, Policy Advocate

P.O. Box 37158, Honolulu, Hawai`i 96837-0158
Phone: 927-0709 henry.lifeoftheland@gmail.com

COMMITTEE ON ENERGY & ENVIRONMENTAL PROTECTION
Rep. Nicole E. Lowen, Chair
Rep. Tina Wildberger, Vice Chair

DATE: Tuesday, January 28, 2020
TIME: 8:30AM
PLACE: Conference Room 325

HB 1864 Relating to Renewable Energy **Support**

Aloha Chair Lowen, Vice Chair Wildberger, and Members of the Committees

Life of the Land is Hawai`i's own energy, environmental and community action group advocating for the people and `aina for 49 years. Our mission is to preserve and protect the life of the land through sound energy and land use policies and to promote open government through research, education, advocacy and, when necessary, litigation.

Supose there is one boy and one girl in a room. You could say that girls make up 50% of the people in the room. But what if you saw a girl in the hall. You could say, I see two girls and there are two people in the room and therefore all of the people in the room are girls.

That is how Hawai`i currently measures renewable energy on the grid. The girl in the hall, that is, the rooftop solar system, is added so as to inflate the percentage. This bill corrects that error.

The bill also speeds up the conversion of fossil fuel to renewabe energy.

One problem remains, there is no legal connection between renewables and climate change, importing wood from tropical rainforests and burning the trees for electricity still counts as reneable energy.

Mahalo
Henry Curtis
Executive Director

TESTIMONY BEFORE HOUSE COMMITTEE ON ENERGY AND ENVIRONMENTAL PROTECTION

H.B. 1864

Relating to Renewable Energy

Tuesday, January 28, 2020
8:30am, Agenda Item #8
State Capitol, Conference Room 325

Chris Lau
Manager, Corporate Energy Planning
Hawaiian Electric Company, Inc.

Chair Lowen, Vice Chair Wildberger, and Members of the Committee:

My name is Chris Lau and I am testifying on behalf of Hawaiian Electric in opposition to H.B. 1864, Relating to Renewable Energy.

Hawaiian Electric opposes H.B. 1864 in its present form, because the impact of fossil-fueled, customer-owned generation on Hawaiian Electric's RPS is not addressed. The change in RPS definition from a percentage of sales to a percentage of generation appropriately removes a double counting of customer-owned renewable generation, however it unfairly penalizes Hawaiian Electric if customers choose to generate their electricity using fossil fuels. It should be noted that by addressing the double-counting of customer-sited renewable generation, the change in the definition will also increase the renewable generation required to meet the same RPS percentage. Based on the Company's most recent long-term planning filings, Hawaiian Electric's RPS achievement could be reduced by as much as 9 to 14 percentage points over the near term due to the change in RPS definition.

In addition to the change in RPS definition, H.B. 1864 increases the interim RPS targets in 2030 from 40% to 65% and in 2040 from 70% to 85% in section 3. Although the Company is moving aggressively to push our RPS performance beyond what is required in the current statute, we oppose these proposed changes as we see growing issues concerning alignment of key energy, land use, and other policies, especially as communities have voiced concerns about siting of certain renewable energy projects. The policies and resources that allow renewable energy development to happen need to be carefully considered before increasing the interim RPS targets. Issues concerning land availability, technical siting, integration costs, and community acceptance will become more frequent as more projects are developed to achieve higher levels of RPS. A study such as the one proposed by S.B. 2547 may be required to examine these issues holistically and address how best to achieve the State's goal of 100% renewable energy. In order to achieve this goal, legislative policies must all be aligned in the same direction and the entire state of Hawai‘i, including, policy makers, agencies, the judiciary, utilities, landowners, and communities, must all work together.

Accordingly, Hawaiian Electric opposes H.B. 1864. Thank you for this opportunity to testify.

HB-1864
Submitted on: 1/27/2020 8:43:47 PM
Testimony for EEP on 1/28/2020 8:30:00 AM

Submitted By	Organization	Testifier Position	Present at Hearing
Devyn	350 Hawaii	Support	No

Comments:

To: The House Committee on Energy & Environmental Protection
From: Devyn
Date: Tuesday, January 28, 2020, 8:30 am

LATE

In strong support of HB 1864

Dear Chair Lowen, Vice Chair Wildberger, and members:

I strongly support HB 1864.

It makes a crucial correction to the State's Renewable Portfolio Standard (RPS) calculation.

Currently, state law calculates RPS by dividing electrical energy sales by total electrical sales, rather than dividing renewable electrical energy generation by total electrical energy generation. This misleading method can provide utilities with double credit for some distributed energy sources, making the calculated RPS greater than the actual RPS.

For example, HECO's forecasted RPS for 2045 is as high as an impossible 183%.

Life of the Land, HECO, and the Deputy Attorney General all agree that the current method could even allow a supposed RPS of over 100% while coal is still being burned for Hawaii's electricity.

This overestimation can create a false appearance of progress toward Hawaii's goal of zero emissions, and contribute to the already rampant complacency about the Climate Crisis. HB 1864 would correct the RPS calculation to avoid this problem.

Secondly, state law sets a goal of 100% "clean energy" by 2045. This was a good start five years ago, though a compromise even then. The reasons 2045 is alarmingly inadequate have become legion, and glaring to anyone paying the least attention.

IPCC reports, endless other scientific studies, incessant "natural" catastrophes, record numbers of records shattered worldwide, and daily life in Hawaii all lead to the excruciatingly obvious conclusion that every government must act, immediately and at emergency speed, to forestall the climate chaos we are still able to affect.

HB 1864 would raise two milestones in our current law: a 65% RPS by 2030 (from 40%), and an 85% RPS by 2040 (from 70%).

These percentages and dates are still far too timid, but they are a step. These changes take time. And we are all but out of time.

Devyn

LATE

Hawaii Solar Energy Association
Serving Hawaii Since 1977

TESTIMONY OF THE HAWAII SOLAR ENERGY ASSOCIATION IN REGARD TO HB1864, RELATING TO RENEWABLE ENERGY BEFORE THE HOUSE COMMITTEE ON ENERGY AND ENVIRONMENTAL PROTECTION TUESDAY, FEBRURAY 28TH, 2020

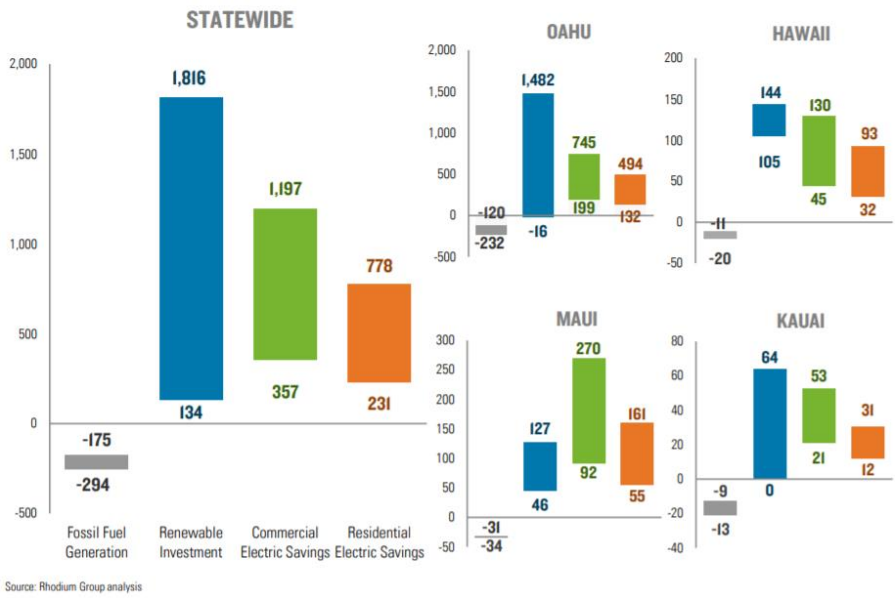
Chair Lowen, Vice-Chair Wildberger, and members of the committee, my name is Will Giese and I represent the Hawaii Solar Energy Association, Inc. (HSEA).

HSEA **supports** HB 1864 and provides comments. This measure amends the definition of renewable portfolio standard to reflect the true amount of renewable energy penetration in the state.

In order to accurately track the progress of the state of Hawaii towards it's 100% renewable portfolio standard goals, accurate definitions are imperative. The original Act 97 contains language that defines "renewable portfolio standard" as the "percentage of electrical energy sales that is represented by renewable electrical energy" (HRS §269-91). Electrical energy sales do not reflect the actual amount of energy being produced or used and leads to misconceptions regarding progress towards a 100% RPS. Renewable energy sales figures would tend to overestimate the amount of renewable energy penetration. As the preamble to this measure correctly points out, the current RPS calculation does not account for the amount of DER installed on the grid on any one island as "renewable", but rather as a loss in overall sales.

Residential and commercial distributed energy systems, along with energy efficiency measures and EV adoption, remain the single most impactful way to lower an individual's electricity bills and reduce their carbon footprint. Additionally, DER deployment remains the

Figure 3.11: Change in employment from electric sector investment and electricity cost savings
2020-2030 annual average relative to current policy, range of potential



Source: Rhodium Group analysis

P.O. Box 37070 Honolulu, Hawaii 96837
SOLAR HOTLINE (808)232-8371

single biggest driver towards meeting RPS goals. Accounting for this should be properly tracked and quantified, in order to give policy makers "the whole picture" of the RPS.

Hawaii specific studies such as the "Transcending Oil"[1] report by the Rhodium Group found "that if oil prices remain low and the cost of renewables declines only modestly, the cheapest pathway would achieve 58% renewable energy by 2030—higher than our current goal of 40%. They also found that if oil prices rise and the cost of renewables declines more rapidly, we could achieve 84% renewable energy by 2030 and save the state up to $7 billion dollars." These savings are also graphically represented in the same report, noted above.

It is very simple: **speeding up the RPS = more savings for the state and its people.** We further encourage the legislature to look at the possibility of moving the 100% RPS goal to 2035 instead of 2045 as well.

We **support** HB 1864 and we urge this committee to pass this measure. Thank you for the opportunity to testify.

Thank you for the opportunity to testify.

[1] https://www.transcendingoil.com/

Chamber LATE rce HAWAII
The Voice of Business

Testimony to the House Committee on Energy and Environmental Protection
Tuesday, January 28, 2020 at 8:30 A.M.
Conference Room 325, State Capitol

RE: HB 1864 RELATING TO RENEWABLE ENERGY

Chair Lowen, Vice Chair Wildberger, and Members of the Committee:

The Chamber of Commerce Hawaii ("The Chamber") **is opposed to** HB 1864, which amends the definition of the renewable portfolio standard (RPS) to be a percentage of electrical energy generation, rather than sales. This bill also amends the RPS interim goals for 2030 and 2040 to accelerate the adoption of renewable energy.

The Chamber is Hawaii's leading statewide business advocacy organization, representing about 2,000+ businesses. Approximately 80% of our members are small businesses with less than 20 employees. As the "Voice of Business" in Hawaii, the organization works on behalf of members and the entire business community to improve the state's economic climate and to foster positive action on issues of common concern.

The Chamber appreciates the benefits of a more sustainable future; however, we see the potential for unintended consequences with the language contained in this legislation. The bill introduces a strict regulation of private industry in order to comply with another government mandate to the existing RPS. We support the efforts to promote renewable energy, but the issue should be examined more thoroughly and holistically. For example, the study proposed by SB 2547 would allow for this further examination by requiring the Hawaii Natural Energy Institute to conduct a feasibility study on the State's ability to achieve its renewable energy goals by 2045.

Thank you for this opportunity to share our concerns about HB 1864.

733 Bishop Street, Suite 1200 • Honolulu, Hawaii 96813 • Phone: (808) 545-4300 • Facsimile: (808) 545-4369

183 Pinana St., Kailua, HI 96734 • 808-262-1285 • info@350Hawaii.org

To: The House Committee on Energy & Environmental Protection
From: Brodie Lockard, Founder, 350Hawaii.org
Date: Tuesday, January 28, 2020, 8:30 am

LATE

In strong support of HB 18

Dear Chair Lowen, Vice Chair Wildberger, and members:

350Hawaii.org strongly supports HB 1864.

State law now figures Hawaii's renewable portfolio standard (RPS) by dividing electrical energy sales by total electrical sales, rather than dividing renewable electrical energy generation by total electrical energy generation. This method can give double credit to utilities for some distributed energy sources, like rooftop photovoltaic systems. It can make the RPS look larger than it actually is.

The current method could even allow electricity from coal and incorrectly calculate an RPS of over 100%. HECO, Life of the Land, and the Deputy Attorney General have all verified this.

The problem is that an artificially inflated RPS can contribute to a sense that our work on the Climate Crisis is sufficient. It is far from sufficient.

This bill calculates the RPS correctly.

Five years ago, Hawaii law mandated 100% "clean energy" by 2045. It's now abundantly clear that 2045 is far, far too late to address the climate chaos that gets worse every day.

Unprecedented wildfires, floods, hurricanes, heat, rain bombs and other monthly catastrophes make it clear that every level of government, everywhere, needs to act like the climate is an emergency. Because it is. And we have a decade before it's too late.

Last year, for example, towns and cities in Hawaii set or tied 270 record hot days. 270 in one year.

We can still avoid some of the Climate Crisis's most cataclysmic effects. But only if we act immediately, and with enormous resolve.

The revised RPS percentages and dates in HB 1864 need to be far more aggressive, but they are a step.

HB 1864 raises the current 40% for 2030 to 65%, and the current 70% in 2040 to 85%.

Pass this. Watch the reports and disasters get worse. Then next year, pass something stronger. That will leave us eight years to take real action.

Brodie Lockard
Founder, 350Hawaii.org

HB-1864
Submitted on: 1/26/2020 2:53:46 PM
Testimony for EEP on 1/28/2020 8:30:00 AM

Submitted By	Organization	Testifier Position	Present at Hearing
Alexandra Kahn	Surfrider Oahu	Support	No

Comments:

HB-1864
Submitted on: 1/27/2020 11:28:32 AM
Testimony for EEP on 1/28/2020 8:30:00 AM

Submitted By	Organization	Testifier Position	Present at Hearing
Javier Mendez-Alvarez	350Hawaii.org	Support	No

Comments:

HOUSE COMMITTEE ON ENERGY & ENVIRONMENTAL PROTECTION
January 28, 2020, 8:30 A.M.
Room 325
(Testimony is 3 pages long)

TESTIMONY IN STRONG SUPPORT OF HB 1864

Aloha Chair Lowen, Vice Chair Wildberger, and Committee members:

Blue Planet Foundation **strongly supports** HB 1864, which makes important amendments to Hawai'i's historic 100% renewable energy standard. This bill does two things:

(1) **Ensures "100%" means "100%"** by making a needed correction to the state's renewable portfolio standard (RPS) calculation; and
(2) **Accelerates the interim renewable targets** (for 2030 and 2040) for electric utilities to accelerate the adoption of renewable energy.

This is a critical measure for **accelerating progress** and ensuring **transparency, consistency, fairness, and consumer confidence** in Hawai'i's 100% renewable energy target.

THE SUCCESS AND IMPORTANCE OF THE RPS LAW

Hawai'i's renewable portfolio standard (RPS) law has been a resounding success. In 2015, the legislature set a vision for Hawai'i's energy security, economic viability, and environmental protection by setting a target of 100% renewable energy by 2045. The 100% RPS law has since impacted the energy system exactly as intended, and is driving energy progress in the state. It has strengthened collaborations and fostered alignment on a variety of regulatory issues. With strong Public Utilities Commission guidance and oversight, Hawai'i's 100% RPS is resulting in utility long-range plans that will achieve the mandate ahead of schedule, while simultaneously saving consumers billions of dollars compared to the fossil fuel status quo.

The 100% RPS has set market expectations. Hawai'i is now securing 100% renewable energy projects, able to provide energy at any time of day or night, for a stable cost that is substantially less than the cost of fossil fuel.

In fact, last year, Hawaiian Electric announced contracts for seven large solar and battery projects at record low prices, proving it is possible to generate clean electricity far cheaper than from fossil fuels.[1] The power from these projects will be as low as 8 cents per kilowatt-hour

[1] *See* https://www.hawaiianelectric.com/new-solar-plus-storage-projects-set-low-price-benchmark-for-

(kWh), with most coming in below 10 cents per kWh. Even the highest-priced project is substantially lower than the 15 cents per kWh average cost to produce electricity from fossil fuels. By comparison, just a few years ago, Hawai‘i was considering importing liquefied natural gas (LNG)—another fossil fuel—to generate electricity for 15 to 20 cents per kWh. Moreover, in July 2019, Hawaiian Electric proposed a new solicitation for nearly 900 megawatts of renewable electricity—likely the largest request for renewables from a utility in the United States.

100% MEANS 100%

This bill ensures “100%” means “100%” by making a needed correction to the RPS calculation. Currently, the state’s RPS calculation can provide utilities with “double credit” for some distributed energy sources, such as rooftop solar. This leads to the outcome that the calculated RPS can be greater than the actual percentage of renewable energy on Hawai‘i’s electric grids. House Bill 1864 would revise the RPS accounting calculation to address this potential outcome.

To the credit of the Hawaiian Electric Companies, the most recent electric utility power supply plans appear to target a fully renewable system, even though a loophole in the RPS calculation improperly accounts for distributed energy generation. To illustrate, the forecasted Hawaiian Electric RPS for 2045 is as high as 183% (the maximum for a properly calculated renewable standard should be 100%). In short, this is because distributed energy resources, such as rooftop solar, impact the RPS calculation in a way that essentially provides a double credit.

In 2018, there was a 5.7% discrepancy between the calculated RPS and the actual renewable generation percentage. House Bill 1864 proposes a simple fix for this math problem.

While power supply planning to date has not been hampered by this faulty calculation, it nonetheless **creates uncertainty and lack of clarity for consumers**. This is a long-standing problematic feature of Hawai‘i’s energy targets. As an example, the circa-2008 clean energy initiative goal of 70% renewable energy was actually a 40% renewable energy goal, with a supporting energy efficiency goal of 30%. Consumers were endlessly confused by the reference to “70%.”

Fixing the RPS calculation is intended to avoid repeating that mistake. **100% renewable energy should mean 100% renewable energy.**

ACCELERATING THE TRANSITION

The state is already on track to achieve the vision set by the legislature for renewable electricity, including both the near-term and long-term RPS requirements. But at least one recent study

---

renewable-energy-in-hawaii

shows that accelerating the interim targets could be more cost-effective for Hawai‘i ratepayers than maintaining the trajectory for renewables under the current RPS law.[2]

Accelerating the transition to 100% renewable energy—as proposed in House Bill 1864—is not only beneficial to Hawai‘i’s economy, it could be crucial for our planet. As the most recent special report from the United Nations Intergovernmental Panel on Climate Change (IPCC) concluded, avoiding climatic catastrophe will require transformative action at a pace and scale never seen before. The special report found that “there is no documented historic precedent” for government action of the kind needed to achieve climate stability.[3] As an island community, we feel this threat firsthand. We must continue to do our part to avoid the most devastating impacts of climate change.

As a state, we’ve committed to doing just that. Beyond the 100% RPS, the Hawai‘i Legislature committed to achieving the objectives set out in the Paris Climate Agreement (Act 32 of 2017) and adopted the goal to be net carbon neutral by 2045 (Act 15 of 2018). Meeting these ambitious targets will require courageous leadership and smart policies—like House Bill 1864—that quickly move us past the status quo.

CONCLUSION

Blue Planet Foundation strongly supports HB 1864 to help **accelerate Hawai‘i’s clean energy progress and provide clarity for the energy sector**. This is an important measure for ensuring transparency, consistency, fairness, and consumer confidence in Hawai‘i’s 100% renewable energy target.

We look forward to working with the legislature on this key policy.

Thank you for the opportunity to testify.

[2] *See* Rhodium Group (commissioned by Elemental Excelerator), *Transcending Oil: Hawai‘i’s Pathway to a Clean Energy Economy* (2018), available at: https://www.transcendingoil.com/.
[3] *See* IPCC, *Special Report on Global Warming on 1.5°C*, available at: https://www.ipcc.ch/sr15/

HB-1864
Submitted on: 1/27/2020 9:38:18 AM
Testimony for EEP on 1/28/2020 8:30:00 AM

Submitted By	Organization	Testifier Position	Present at Hearing
Tanya Aynessazian	Individual	Support	No

Comments:

HB-1864
Submitted on: 1/27/2020 12:14:01 AM
Testimony for EEP on 1/28/2020 8:30:00 AM

Submitted By	Organization	Testifier Position	Present at Hearing
christine trecker	Individual	Support	No

Comments:

HB-1864
Submitted on: 1/27/2020 4:33:04 AM
Testimony for EEP on 1/28/2020 8:30:00 AM

Submitted By	Organization	Testifier Position	Present at Hearing
Nanea Lo	Individual	Support	No

Comments:

Hello,

My name is Nanea Lo and I am a lifelong resident and kanaka maoli (Native Hawaiian) of this land. I am writing to say I fully support this bill and I'm asking for you all to do the same.

Me ke aloha ‘Ä• ina,

Nanea Lo

HB-1864
Submitted on: 1/24/2020 5:18:54 PM
Testimony for EEP on 1/28/2020 8:30:00 AM

Submitted By	Organization	Testifier Position	Present at Hearing
Dyson Chee	Individual	Support	No

Comments:

HB-1864
Submitted on: 1/27/2020 9:03:42 AM
Testimony for EEP on 1/28/2020 8:30:00 AM

Submitted By	Organization	Testifier Position	Present at Hearing
Peg Sullivan-Miller	Individual	Support	No

Comments:

HB-1864
Submitted on: 1/27/2020 7:25:16 AM
Testimony for EEP on 1/28/2020 8:30:00 AM

Submitted By	Organization	Testifier Position	Present at Hearing
Lynn Aaberg	Individual	Support	No

Comments:

This is important for Hawai‘i to face the climate catastrophe!

HB-1864
Submitted on: 1/27/2020 12:36:12 AM
Testimony for EEP on 1/28/2020 8:30:00 AM

Submitted By	Organization	Testifier Position	Present at Hearing
Louis Herman	Individual	Support	No

Comments:

HB-1864
Submitted on: 1/26/2020 10:56:36 PM
Testimony for EEP on 1/28/2020 8:30:00 AM

Submitted By	Organization	Testifier Position	Present at Hearing
Joy Silver	Individual	Support	No

Comments:

HB-1864
Submitted on: 1/26/2020 10:18:03 PM
Testimony for EEP on 1/28/2020 8:30:00 AM

Submitted By	Organization	Testifier Position	Present at Hearing
John Nix	Individual	Support	No

Comments:

A;oha all,

Please support HB1864 and lead us into the future away from toxic exposure and away from a dying planet. Support increasing good paying jobs and let us all benefit from doing the right thing,

Mahalo,

Dr. John and Debra Nix

Kihei

HB-1864
Submitted on: 1/26/2020 10:16:00 PM
Testimony for EEP on 1/28/2020 8:30:00 AM

Submitted By	Organization	Testifier Position	Present at Hearing
Zoe Malia Ozoa Loos	Individual	Support	No

Comments:

Anything and everything needs to be done in order to take protect our aina, our keiki, our community during the climate crisis. We must do what it takes, we must lead the way as an island nation that will deal with more problems than the mainland. Problems that only an island nation will have to deal with. There should be no reason for me or anyone to convince legislators to enact laws that will fight to protect the land and do what needs to be done in order to help alleviate and reverse what is happening in our Aloha State.

Mahalo for all the work you have been doing and will be doing, I full-heartedly support all legislation that will work towards climate justice.

HB-1864
Submitted on: 1/26/2020 10:15:06 PM
Testimony for EEP on 1/28/2020 8:30:00 AM

Submitted By	Organization	Testifier Position	Present at Hearing
Judith A Mick	Individual	Support	No

Comments:

HB-1864
Submitted on: 1/27/2020 11:14:20 AM
Testimony for EEP on 1/28/2020 8:30:00 AM

Submitted By	Organization	Testifier Position	Present at Hearing
janice palma-glennie	Individual	Support	No

Comments:

please support this measure which will supports wise efforts to prevent Climate Crisis.

mahalo and sincerely,

janice palma-glennie

kailua-kona

HB-1864
Submitted on: 1/27/2020 1:20:12 PM
Testimony for EEP on 1/28/2020 8:30:00 AM

Submitted By	Organization	Testifier Position	Present at Hearing
Jesse Brown-Clay	Individual	Support	No

Comments:

HB-1864
Submitted on: 1/27/2020 1:47:51 PM
Testimony for EEP on 1/28/2020 8:30:00 AM

Submitted By	Organization	Testifier Position	Present at Hearing
Jonathan Boyne	Individual	Support	No

Comments:

I support HB1864.

HB-1864
Submitted on: 1/27/2020 6:28:34 PM
Testimony for EEP on 1/28/2020 8:30:00 AM

Submitted By	Organization	Testifier Position	Present at Hearing
Caroline Kunitake	Individual	Support	No

Comments:

Please support HB1864.

LATE

Mahalo,

Caroline Kunitake

HB-1864
Submitted on: 1/27/2020 7:12:07 PM
Testimony for EEP on 1/28/2020 8:30:00 AM

Submitted By	Organization	Testifier Position	Present at Hearing
Matthew Geyer	Individual	Support	Yes

Comments:

These small incremental changes are important, but we need to do so much more to fight climate change in order to leave a decent world for our children to thrive in.

HB-1864
Submitted on: 1/27/2020 7:21:46 PM
Testimony for EEP on 1/28/2020 8:30:00 AM

Submitted By	Organization	Testifier Position	Present at Hearing
Koohan Paik	Individual	Support	No

Comments:

HB-1864
Submitted on: 1/27/2020 8:26:42 PM
Testimony for EEP on 1/28/2020 8:30:00 AM

Submitted By	Organization	Testifier Position	Present at Hearing
Carolynn Bell-Tuttle	Individual	Support	No

Comments:

LATE

HB-1864
Submitted on: 1/27/2020 8:41:59 PM
Testimony for EEP on 1/28/2020 8:30:00 AM

Submitted By	Organization	Testifier Position	Present at Hearing
John NAYLOR	Individual	Support	No

Comments:

LATE

HB-1864
Submitted on: 1/27/2020 8:42:31 PM
Testimony for EEP on 1/28/2020 8:30:00 AM

Submitted By	Organization	Testifier Position	Present at Hearing
Bradford Baang	Individual	Support	No

Comments:

To: The House Committee on Energy & Environmental Protection
From: Brad Baang, Waianae, HI 96792
Date: Tuesday, January 28, 2020, 8:30 am

In strong support of HB 1864

LATE

Dear Chair Lowen, Vice Chair Wildberger, and members:

I strongly support HB 1864.

It makes a crucial correction to the State's Renewable Portfolio Standard (RPS) calculation.

Currently, state law calculates RPS by dividing electrical energy sales by total electrical sales, rather than dividing renewable electrical energy generation by total electrical energy generation. This misleading method can provide utilities with double credit for some distributed energy sources, making the calculated RPS greater than the actual RPS.

For example, HECO's forecasted RPS for 2045 is as high as an impossible 183%.

Life of the Land, HECO, and the Deputy Attorney General all agree that the current method could even allow a supposed RPS of over 100% while coal is still being burned for Hawaii's electricity.

This overestimation can create a false appearance of progress toward Hawaii's goal of zero emissions, and contribute to the already rampant complacency about the Climate Crisis. HB 1864 would correct the RPS calculation to avoid this problem.

Secondly, state law sets a goal of 100% "clean energy" by 2045. This was a good start five years ago, though a compromise even then. The reasons 2045 is alarmingly inadequate have become legion, and glaring to anyone paying the least attention.

IPCC reports, endless other scientific studies, incessant "natural" catastrophes, record numbers of records shattered worldwide, and daily life in Hawaii all lead to the excruciatingly obvious conclusion that every government must act, immediately and at emergency speed, to forestall the climate chaos we are still able to affect.

HB 1864 would raise two milestones in our current law: a 65% RPS by 2030 (from 40%), and an 85% RPS by 2040 (from 70%).

These percentages and dates are still far too timid, but they are a step. These changes take time. And we are all but out of time.

Mahalo,

Brad Baang

To: The House Committee on Energy & Environmental Protection
From: Pearl Johnson
Date: Tuesday, January 28, 2020, 8:30 am

In strong support of HB 1864

LATE

Dear Chair Lowen, Vice Chair Wildberger, and members:

I strongly support HB 1864.

It makes a crucial correction to the State's Renewable Portfolio Standard (RPS) calculation.

Currently, state law calculates RPS by dividing electrical energy sales by total electrical sales, rather than dividing renewable electrical energy generation by total electrical energy generation. This misleading method can provide utilities with double credit for some distributed energy sources, making the calculated RPS greater than the actual RPS.

For example, HECO's forecasted RPS for 2045 is as high as an impossible 183%.

Life of the Land, HECO, and the Deputy Attorney General all agree that the current method could even allow a supposed RPS of over 100% while coal is still being burned for Hawaii's electricity.

This overestimation can create a false appearance of progress toward Hawaii's goal of zero emissions and contribute to the already rampant complacency about the Climate Crisis. HB 1864 would correct the RPS calculation to avoid this problem.

Secondly, state law sets a goal of 100% "clean energy" by 2045. This was a good start five years ago, though a compromise even then. The reasons 2045 is alarmingly inadequate have become legion and glaring to anyone paying the least attention.

IPCC reports, endless other scientific studies, incessant "natural" catastrophes, record numbers of records shattered worldwide, and daily life in Hawaii all lead to the excruciatingly obvious conclusion that every government must act, immediately and at emergency speed, to forestall the climate chaos we are still able to affect.

HB 1864 would raise two milestones in our current law: a 65% RPS by 2030 (from 40%), and an 85% RPS by 2040 (from 70%).

These percentages and dates are still far too timid, but they are a step. These changes take time. And we are all but out of time.

Pearl Johnson

45-090 Namoku St. apt 1304

Kaneohe HI 96744

808-779-8808

HB-1864
Submitted on: 1/27/2020 9:09:20 PM
Testimony for EEP on 1/28/2020 8:30:00 AM

Submitted By	Organization	Testifier Position	Present at Hearing
John Grandinetti	Individual	Support	Yes

Comments:

LATE

HB-1864
Submitted on: 1/28/2020 10:27:29 AM
Testimony for EEP on 1/28/2020 8:30:00 AM

Submitted By	Organization	Testifier Position	Present at Hearing
donald erway	Individual	Support	No

Comments:

The GEMS program was a great idea for offering accessible, affordable, cost-effective green infrastructure financing options to customers. The building energy efficiency revolving loan fund went far in helping low-income residents borrow from the State to make energy efficiency improvements to buildings. But they've had limits.

* These programs suffered from inefficient bond financing.

* Because it's expended annually, a revolving loan fund will improve these flaws.

LATE

LATE

HB-1864
Submitted on: 1/28/2020 11:37:49 AM
Testimony for EEP on 1/28/2020 8:30:00 AM

Submitted By	Organization	Testifier Position	Present at Hearing
Barbara Hershey	Individual	Support	No

Comments:

LATE

LATE

HB-1864
Submitted on: 1/28/2020 3:13:55 PM
Testimony for EEP on 1/28/2020 8:30:00 AM

Submitted By	Organization	Testifier Position	Present at Hearing
Malachy Grange	Individual	Support	No

Comments:

Let's get our commitment to 'Green Government' going.

LATE

LATE

HB-1864
Submitted on: 1/28/2020 6:17:13 PM
Testimony for EEP on 1/28/2020 8:30:00 AM

Submitted By	Organization	Testifier Position	Present at Hearing
Mark A. Koppel	Individual	Support	No

Comments:

RENEWABLE ENERGY IS CRUCIAL FOR THE STATE.

CHOPPING DOWN TREES (HU HONUA) IS NOT RENEWABLE. THE PLANT MUST BE STOPPED NOW.

LATE

LATE

HB-1864
Submitted on: 1/28/2020 9:43:05 PM
Testimony for EEP on 1/28/2020 8:30:00 AM

Submitted By	Organization	Testifier Position	Present at Hearing
Phaethon Keeney	Individual	Support	No

Comments:

To: House Committee on Energy & Environmental Protection

Aloha! Strong SUPPORT for HB1864

We need a clear definition of the Renewable Portfolio Standard (RPS). The current definition is demonstrably ridiculous and misleading. HB1864 would correct the inconsistency in the definition and raise the RPS target to 65% by 2030, which is still too slow, we need 100% by 2030, but this bill is better than the current existing target. Hawaii, due to see the greatest number and cumulative severity of impacts of Climate Change of any State in the Nation, needs serous targets in line with a livable planet. The UN IPCC gives us 10 years to reduce global emissions by 50% (100% in Energy & Transport by 2030 is easiest) to hold to the Paris targets of 1.5C. While 1C above preindustrial levels is showing extreme impacts already, 1.5C is a best case scenario that threatens governmental collapse and unlivable heat index in some equatorial areas of the globe, while 2C has been called "unconcionable" for people and planet. 2C is a likely "tipping point" towards a "Hothouse Earth" beyond human control. On our current trajectory we will likely be at 1.5 C in the 2030's and 2C in the 2040's (see IPCC report on 1.5C) as we fly past these targets on the redline "worst case scenario" despite ambitions towards a 4C (and more likely above, current modeling indicates 7C) future by the end of the century. The IPCC redline is not factoring in Earth System tipping points given likely at 2C, please see the 2018 PNAS paper "Trajectories of the Earth System in the Anthropocene," pretty much the the scariest science paper ever written. Please do the right thing and act quickly. We need 100% RPS by 2030, no other targets will get things moving quickly enough, and our increased ambition will encourage others, this is a snowball moment, or firestorm. Do your best, thank you.

Sincerely,

Phaethon Keeney

Honokaa Hawaii

LATE