



DAVID Y. IGE
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JOSH GREEN
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**STATE OF HAWAII
OFFICE OF THE DIRECTOR
DEPARTMENT OF COMMERCE AND CONSUMER AFFAIRS**

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DEPUTY DIRECTOR

Testimony of the Department of Commerce and Consumer Affairs

**Before the
House Committee on Consumer Protection and Commerce
Wednesday, February 5, 2020
2:00 p.m.
State Capitol, Conference Room 329**

**On the following measure:
H.B. 1864, H.D. 1, RELATING TO RENEWABLE ENERGY**

Chair Takumi 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. H.D. 1 amends the effective date of the measure to July 1, 2050, and adds a "technical, nonsubstantive" change to the legislative findings in section 1 of the bill.

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.

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

TO THE
HOUSE COMMITTEE ON
CONSUMER PROTECTION & COMMERCE

February 5, 2020
2:00 p.m.

Chair Takumi and Members of the Committee:

MEASURE: H.B. No. 1864 HD1

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. Effective 7/1/2050. (HD1)

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.

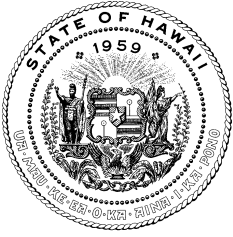
The Commission notes that expressing RPS requirements in terms of electricity generation rather than utility sales has the effect of making achievement of the RPS targets more challenging, since under the current definition, customer-sited renewable generation is counted as generation and also reduces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

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.



HAWAII STATE ENERGY OFFICE STATE OF HAWAII

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

DAVID Y. IGE
GOVERNOR

SCOTT J. GLENN
CHIEF ENERGY OFFICER

(808) 587-3807

Testimony of **SCOTT J. GLENN, Chief Energy Officer**

before the
HOUSE COMMITTEE ON CONSUMER PROTECTION & COMMERCE
Wednesday, February 5, 2020
2:00 PM
State Capitol, Conference Room 329

Comments in consideration of **HB 1864, HD 1** **RELATING TO RENEWABLE ENERGY.**

Chair Takumi, Vice Chair Ichiyama, and members of the Committee. The Hawaii State Energy Office supports HB 1864, HD 1, 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."

The Hawaii State Energy Office's comments are guided by its mission to promote energy efficiency, renewable energy, energy resiliency, and clean transportation to help achieve a decarbonized economy.

Thank you for the opportunity to testify.

HB-1864-HD-1

Submitted on: 2/3/2020 2:36:37 PM

Testimony for CPC on 2/5/2020 2:00:00 PM

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

Comments:

Date: February 5, 2020

Time: 2:00 p.m.

Place: Conference Room 329

Chair Takumi, Vice Chair Ichiyama and Consumer Protection and Commerce Committee members:

The Climate Protectors Coalition **strongly supports HB 1864 HD1!**

The Climate Protectors Coalition is a new group inspired by the Mauna Kea Protectors but focused on reversing the climate crisis. As a tropical island State, Hawaii will be among the first places harmed by the global climate crisis, with more intense storms, loss of protective coral reefs, and rising sea levels.

We must do all we can to reduce our carbon footprint and become at least carbon neutral as soon as possible, including by amending the RPS to more accurately measure the State's progress toward 100% renewable energy as the bill proposes (measuring generation, not sales.) The bill's provision to amend the RPS interim goals for 2030 and 2040 (to 65 and 85%, respectively) to accelerate the adoption of renewable energy is even more critical in light of the increasingly dire forecasts regarding the climate crisis. Please pass this bill! Mahalo!



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

To: The House Committee on Committee On Consumer Protection & Commerce
From: Brodie Lockard, Founder, 350Hawaii.org
Date: Wednesday, February 5, 2020, 2:00 pm

In strong support of HB 1864 HD1

Dear Chair Takumi, and members:

350Hawaii strongly supports HB 1864 HD1.

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-HD-1

Submitted on: 2/3/2020 10:30:09 PM

Testimony for CPC on 2/5/2020 2:00:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Dyson Chee	Hawaii Youth Climate Coalition	Support	No

Comments:



**Hawaiian
Electric**

**TESTIMONY BEFORE HOUSE COMMITTEE ON
CONSUMER PROTECTION AND COMMERCE**

H.B. 1864 H.D 1

Relating to Renewable Energy

Wednesday, February 5, 2020
2:00pm, Agenda Item #4
State Capitol, Conference Room 329

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

Chair Takumi, Vice Chair Ichiyama, and Members of the Committee:

My name is Chris Lau and I am testifying on behalf of Hawaiian Electric Company **in opposition to H.B. 1864 H.D. 1**, Relating to Renewable Energy.

Hawaiian Electric opposes H.B. 1864 H.D. 1 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 Hawaiian Electric's most recent long-term planning filings, our 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., including the RPS goal of 30% this year, 2020.

In addition to the change in RPS definition, H.B. 1864 H.D. 1 increases the interim RPS targets in 2030 from 40% to 65% and in 2040 from 70% to 85% in section 3. Although Hawaiian Electric 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 H.D. 1. Thank you for this opportunity to testify.



SIERRA CLUB OF HAWAI'I

HOUSE COMMITTEE ON CONSUMER PROTECTION AND COMMERCE

February 5, 2020 2:00 PM Room 329

In **SUPPORT** of **HB1864 HD1**: Relating to Renewable Energy

Aloha Chair Takumi, Vice Chair Ichiyama, and members of the committee,

On behalf of our 20,000 members and supporters, the Sierra Club of Hawai'i **supports HB1864 HD1**, which fixes the calculation of Hawai'i'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 Excelsior and completed by Rhodium Group, concluded that accelerating Hawai'i's transition to clean energy would be cheaper for Hawai'i 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 Kaua'i is already achieving 100% clean electricity. In light of Hawai'i's progress, it seems reasonable to adjust the interim RPS targets for 2030 and 2040.

Mahalo for supporting HB1864,

Jodi Malinoski, Policy Advocate

HB-1864-HD-1

Submitted on: 2/3/2020 5:58:37 PM

Testimony for CPC on 2/5/2020 2:00:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Andrea Quinn	Individual	Support	No

Comments:

Dear Honorable Committee Members:

Please support HB1864.

Thank you for the opportunity to present my testimony.

Andrea Quinn

Kihei



Chamber of Commerce HAWAII

The Voice of Business

**Testimony to the House Committee on Consumer Protection and Commerce
Wednesday, February 5, 2020 at 2:00 P.M.
Conference Room 329, State Capitol**

RE: HB 1864 HD1, RELATING TO RENEWABLE ENERGY

Chair Takumi, Vice Chair Ichiyama, and Members of the Committee:

The Chamber of Commerce Hawaii ("The Chamber") **is opposed to** HB 1864 HD1, 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 HD1.



Hawaii Solar Energy Association
Serving Hawaii Since 1977

**TESTIMONY OF THE HAWAII SOLAR ENERGY ASSOCIATION
 IN REGARD TO HB1864 HD1, RELATING TO RENEWABLE ENERGY
 BEFORE THE
 HOUSE COMMITTEE ON CONSUMER PROTECTION AND COMMERCE
 WEDNESDAY, FEBRUARY 4TH, 2020**

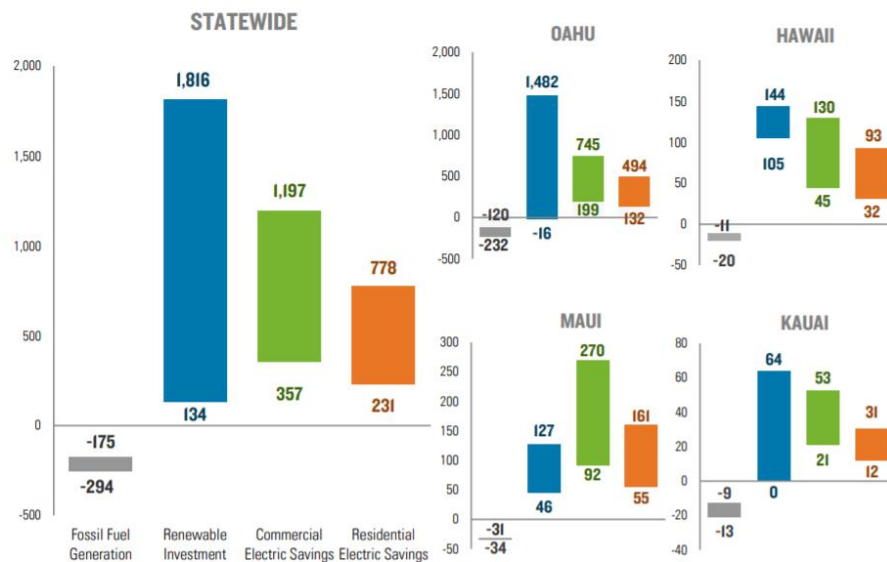
Chair Takumi, Vice-Chair Ichiyama, and members of the committee, my name is Will Giese and I represent the Hawaii Solar Energy Association, Inc. (HSEA).

HSEA **supports** HB 1864 HD1 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 its 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.II: 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



Hawaii Solar Energy Association

Serving Hawaii Since 1977

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 HD1 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/>



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

COMMITTEE ON CONSUMER PROTECTION & COMMERCE

Rep. Roy M. Takumi, Chair

Rep. Linda Ichiyama, Vice Chair

DATE: Wednesday, February 5, 2020

TIME: 2:00 pm

PLACE: Conference Room 329

HB 1864 HD1 Relating to Renewable Energy

Support

Aloha Chair Takumi, Vice Chair Ichiyama, and Members of the Committee

Life of the Land is Hawai'i's own energy, environmental and community action group advocating for the people and `aina for 50 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.

If an island generates three kWh of electricity, two from rooftop solar and one from a grid-connected coal plant, then according to HRS §269-91 the Renewable Portfolio Standard is $\text{renewables}/\text{grid} = 2/1 = 200\%$. Twice the State goal of 100% by 2045.

HECO agreed with Life of the Land's analysis in 2015. This error has existed for years. Let's fix it. Let's be honest when we say we want to be fossil free by 2045.

Please change the effective date to July 1, 2020.

Mahalo

Henry Curtis

Executive Director



Email: communications@ulupono.com

HOUSE COMMITTEE ON CONSUMER PROTECTION AND COMMERCE
Wednesday, February 5, 2020 — 2:00 p.m. — Room 329

Ulupono Initiative Supports HB 1864 HD 1, Relating to Renewable Energy.

Dear Chair Takumi and Members of the Committee:

My name is Amy Hennessey, and I am the Senior Vice President of Communications & External Affairs at Ulupono Initiative. We are a Hawai'i-based impact investment firm that strives to improve our community's quality of life by creating more locally produced food; increasing affordable clean renewable energy and transportation options; and better managing waste and fresh water resources.

Ulupono supports HB 1864 HD 1, which amends the definition of “renewable portfolio standard” to more accurately reflect the percentage of renewable energy use in the State, because it aligns with our goal of increasing the production of clean, renewable energy in Hawai'i.

Under the current definition, the double counting of renewable distributed energy resources by using “sales” instead of “generation” in the denominator results in the RPS that overstates our actual progress. For the 2020 goal of 30 percent, the actual renewable generation as a percentage of total generation is estimated at approximately 25 percent. Similarly, for the 2030 RPS goal of 40 percent, the actual renewable generation is estimated at 28 percent.

As Hawai'i's energy issues become increasingly complex and challenging, we appreciate this committee's efforts to look at policies that support renewable energy production.

Thank you for this opportunity to testify.
Respectfully,

Amy Hennessey, APR
Senior Vice President, Communications & External Affairs

Investing in a Sustainable Hawai'i



ELEMENTAL EXCELERATOR

Written Statement of Elemental Excelerator before the House Committee on Consumer Protection and Commerce February 5, 2020

In consideration of [HB 1864 HD1](#) RELATING TO RENEWABLE ENERGY

Aloha Chair Takumi, Vice-Chair Ichiyama, and Members of the House Committee on Consumer Protection and Commerce:

Elemental Excelerator **submits support** for HB 1864 HD 1, 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.



HOUSE COMMITTEE ON CONSUMER PROTECTION & COMMERCE

February 5, 2020, 2:00 P.M.

Room 329

(Testimony is 3 pages long)

TESTIMONY IN SUPPORT OF HB 1864 HD1

Aloha Chair Takumi, Vice Chair Ichiyama, 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 (kWh), with most coming in below 10 cents per kWh. Even the highest-priced project is

¹ See <https://www.hawaiianelectric.com/new-solar-plus-storage-projects-set-low-price-benchmark-for-renewable-energy-in-hawaii>

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 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

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/>.

Accelerating the transition to 100% renewable energy—as proposed in HB 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. We respectfully request that the Committee forward HB 1864 HD1, amended to take effect upon approval.

Thank you for the opportunity to testify.

³ See IPCC, *Special Report on Global Warming on 1.5°C*, available at: <https://www.ipcc.ch/sr15/>

HB-1864-HD-1

Submitted on: 2/4/2020 3:06:43 PM

Testimony for CPC on 2/5/2020 2:00:00 PM

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

Comments:

Dear Chair Takumi, and members:

As one of 350Hawaii.org's 6,000 members, I strongly support HB 1864 HD1.

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 save ourselves.

HB-1864-HD-1

Submitted on: 2/4/2020 3:11:35 PM

Testimony for CPC on 2/5/2020 2:00:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Kelsey Nichols	Individual	Support	No

Comments:

HB-1864-HD-1

Submitted on: 2/4/2020 3:24:33 PM

Testimony for CPC on 2/5/2020 2:00:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Lois Crozer	Individual	Support	No

Comments:

HB-1864-HD-1

Submitted on: 2/4/2020 4:01:51 PM

Testimony for CPC on 2/5/2020 2:00:00 PM

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

Comments:

Please SUPPORT HB 1864 HD1

Dear Chair Takumi, and members:

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, and 85% in 2040, 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 serious 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 oft cited and respected 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

HB-1864-HD-1

Submitted on: 2/4/2020 5:10:17 PM

Testimony for CPC on 2/5/2020 2:00:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Jean Simon	Individual	Support	No

Comments:

HB-1864-HD-1

Submitted on: 2/4/2020 5:18:37 PM

Testimony for CPC on 2/5/2020 2:00:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Sherry Pollack	Individual	Support	No

Comments:

I strongly support this bill that would fix the error in the RPS calculation to be a percentage of electrical energy generation, rather than sales. I also support amending the renewable portfolio standard goals, but the dates still need to be far more aggressive to match what the current science tells us is required to avoid the worst of climate breakdown. Please follow what the scientists are advising us in the IPCC report. Having our goal to achieve 100% of our electricity generation by 2045 is simply and woefully too late. Thank you for this opportunity to testify.

HB-1864-HD-1

Submitted on: 2/4/2020 6:54:21 PM

Testimony for CPC on 2/5/2020 2:00:00 PM

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

Comments:

To: The House Committee on Consumer Protection & Commerce

From: **Caroline Kunitake**

Date: Wednesday, February 5, 2020, 2:00 pm

In strong support of HB 1864 HD1

Dear Chair Takumi, and members:

As one of 350Hawaii.org's 6,000 members, I strongly support HB 1864 HD1.

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%.

We want Hawaii to be a leader in renewable energy. Please pass this bill.

Mahalo,

Caroline Kunitake

HB-1864-HD-1

Submitted on: 2/4/2020 10:56:23 PM

Testimony for CPC on 2/5/2020 2:00:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Audrey Enseki-Tom	Individual	Support	No

Comments:

Please pass this bill. It puts more responsibility on automobile users to reduce their impact on the environment.

HB-1864-HD-1

Submitted on: 2/5/2020 12:46:42 AM

Testimony for CPC on 2/5/2020 2:00:00 PM

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

Comments:

HB-1864-HD-1

Submitted on: 2/5/2020 7:38:56 AM

Testimony for CPC on 2/5/2020 2:00:00 PM

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

Comments:

Dear Chair Takumi, and members:

As one of 350Hawaii.org's 6,000 members, I strongly support HB 1864 HD1. It is of the utmost importance to demonstrate resolve to addressing the climate crisis, and this bill helps.

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.

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.

This must be corrected so we can make progress in our climate goals.

Sincerely

Lynn Aaberg

HB-1864-HD-1

Submitted on: 2/5/2020 9:19:28 AM

Testimony for CPC on 2/5/2020 2:00:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
ChristopherMcCullough	Individual	Support	No

Comments:

LATE

HB-1864-HD-1

Submitted on: 2/5/2020 9:42:46 AM

Testimony for CPC on 2/5/2020 2:00:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Noel Morin	Individual	Support	No

Comments:

Dear Chair Takumi, and members:

I strongly support HB 1864 HD1.

We cannot manage if we don't monitor the right things. *A car with a mis-calibrated speedometer is bound to get a driver into trouble. A faulty thermometer can contribute to misdiagnosis and treatment.* Our formula for calculating our RPS does not accurately determine how we are meeting our renewable energy goals and is creating a false impression of progress against our 2045 RPS goal.

We need a measure that ensures accuracy and truth in the actual percentage of energy is being created from non-fossil fuel and non-carbon emitting solutions. A shift to a formula that divides renewable electrical energy generation by total electrical energy generation (Renewable Energy Generated/Total Energy Generated), what is proposed by this measure, is a much better approach to what we have today.

We must be hyper-aggressive and focused on meeting our decarbonization goals. The 2045 RPS goal is likely not aggressive enough, given what we've been seeing globally over the past few years. The planet is warming in an unprecedented manner and the consequences (mega-fires, rain bombs, droughts, super storms, geo-political conflicts related to climate-related migration, and heavy threat to priceless cities and communities) are happening now and more frequently. We need to treat climate change with the same level of action and urgency as one would offer an existential threat because it is one.

An inaccurate depiction of our progress against our goals will only make it more challenging for us to meet them. We need to accurately report progress, introduce more aggressive goals (2045 is really too late), and adopt similar strategies for the decarbonization of transportation.

Please help us help ourselves. Please pass this measure.

Sincerely,

Noel Morin

LATE

HB-1864-HD-1

Submitted on: 2/5/2020 10:00:31 AM

Testimony for CPC on 2/5/2020 2:00:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Meredith Buck	Individual	Support	No

Comments:

I support this bill

LATE

HB-1864-HD-1

Submitted on: 2/5/2020 10:32:36 AM

Testimony for CPC on 2/5/2020 2:00:00 PM

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

Comments:

Please consider the fact that the consensus amongst climate scientists worldwide is that we have 12 years to solve the climate crisis problem.

I hope you will continue to accelerate the transition to clean energy by supporting more powerful bills that make a difference climate change

HB-1864-HD-1

Submitted on: 2/5/2020 11:27:19 AM

Testimony for CPC on 2/5/2020 2:00:00 PM

LATE

Submitted By	Organization	Testifier Position	Present at Hearing
Stephanie Hall Morin	Individual	Support	No

Comments: