DEPARTMENT OF BUSINESS, ECONOMIC DEVELOPMENT & TOURISM

NEIL ABERCROMBIE
GOVERNOR

RICHARD C. LIM
DIRECTOR

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Statement of
Richard C. Lim
Director
Department of Business, Economic Development, and Tourism
before the
House Committee on Energy & Environmental Protection
Tuesday, February 5, 2013
8:30 AM
State Capitol, Conference Room 325

in consideration of

HB 80 RELATING TO RENEWABLE PORTFOLIO STANDARDS.

Chair Lee, Vice Chair Thielen, and Members of the Committee.

The Department of Business, Economic Development, and Tourism (DBEDT) respectfully offers comments on HB 80, which would allow the Public Utilities Commission (PUC) to give preference to certain renewable energy sources when establishing portfolio standards.

We defer to the Public Utilities Commission on the regulatory aspects of this bill. We offer the comment that we are concerned about any measure that attempts to interfere with the ability of the Public Utilities Commission (PUC) to regulate Hawaii's electric utilities. The PUC has existing authority to periodically review and modify the Renewable Portfolio Standard (RPS) under Hawaii Revised Statutes (HRS) 269-95 Sections (4) and (5).

Thank you for the opportunity to offer these comments.

TESTIMONY OF HERMINA MORITA
CHAIR, PUBLIC UTILITIES COMMISSION
DEPARTMENT OF BUDGET AND FINANCE
STATE OF HAWAII
TO THE
HOUSE COMMITTEE ON ENERGY & ENVIRONMENTAL PROTECTION

FEBRUARY 5, 2013
8:30 a.m.

MEASURE: H.B. No. 80
TITLE: Relating to Renewable Portfolio Standards

Chair Lee and Members of the Committee:

DESCRIPTION:

This measure authorizes the Public Utilities Commission ("Commission") to "give preference to renewable energy resources that reduce or eliminate the amount of fossil fuel used in the generation of the renewable energy and result in reduced energy transmission volatility" when setting Renewable Portfolio Standards ("RPS") for the States' utilities.

POSITION:

The Commission supports the intent of this measure to revisit and strengthen, as needed, Hawaii's RPS mandates, but feels this measure is premature and issues of concern to the Legislature may be better conveyed through a resolution as the Commission embarks on a legislatively-mandated review of the RPS. The Committee would like to offer the following comments for the Committee's consideration.

COMMENTS:

Multiple measures have been introduced during this session that would amend the RPS, without supporting comprehensive technical or policy analysis.[1] However, Section 269-95, Hawaii Revised Statutes ("HRS"), explicitly requires the Commission to "[e]valuate the renewable

[1]Including H.B. No. 80, relating to renewable portfolio standards, the 2014 Legislature has introduced several RPS-focused measures. H.B. No. 757, relating to energy independence, would set new RPS goals for the ends of 2040 and 2050 for electric utilities of seventy per cent of net electricity sales and one hundred per cent of net electricity sales, respectively. H.B. No. 1107, relating to clean energy standards, proposes to change the current RPS to a "clean energy standards" system that focuses on lifecycle greenhouse gas emissions for each energy source used by a utility.

portfolio standards every five years, beginning in *2013*, and may revise the standards based on the best information available at the time to determine if the standards established by section 269-92 remain effective and achievable." In compliance with HRS § 269-95, the Commission is embarking on such an evaluation this calendar year. The Commission will submit its findings and recommended revisions to the RPS prior to the convening of the 2014 regular session. Therefore, the Commission believes H.B. No. 80 is premature.

The Commission feels that a resolution adopted by the Legislature outlining critical areas of concern related to the RPS would be a more effective vehicle to inform the comprehensive review of the RPS. Further, Section 1 of H.B. No. 80 refers to ambiguities and "unanticipated loopholes to be exploited" in the current RPS provisions under Part V, HRS Chapter 269. The Commission should not speculate on what these uncertainties are, so we respectfully ask the Committee to clearly articulate the ambiguities and "unanticipated loopholes" so that the Commission can address these issues with no misunderstanding of the Legislature's directive in its review of the RPS.

Thank you for the opportunity to testify on this measure.

NEIL ABERCROMBIE
GOVERNOR

SHAN S. TSUTSUI
LT. GOVERNOR

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KEALI`I S. LOPEZ
DIRECTOR

JO ANN UCHIDA TAKEUCHI
DEPUTY DIRECTOR

TO THE HOUSE COMMITTEE
ON ENERGY AND ENVIRONMENTAL PROTECTION

THE TWENTY-SEVENTH LEGISLATURE
REGULAR SESSION OF 2013

TUESDAY, FEBRUARY 5, 2013
8:30 A.M.

TESTIMONY OF JEFFREY T. ONO, EXECUTIVE DIRECTOR, DIVISION OF CONSUMER ADVOCACY, DEPARTMENT OF COMMERCE AND CONSUMER AFFAIRS, TO THE HONORABLE CHRIS LEE, CHAIR, AND MEMBERS OF THE COMMITTEE

HOUSE BILL NO. 80 - RELATING TO RENEWABLE PORTFOLIO STANDARDS.

DESCRIPTION:

This measure proposes to authorize the State of Hawaii Public Utilities Commission ("PUC") to give preference to renewable energy resources that reduce or eliminate the use of fossil fuel in the generation of renewable energy in the establishment of the State's renewable portfolio standards ("RPS") goals.

POSITION:

The Division of Consumer Advocacy ("Consumer Advocate") supports the intent of this measure and offers the following comments on the bill.

COMMENTS:

As noted by the PUC in its testimony before this Committee, Section 269-95, Hawaii Revised Statutes ("HRS"), requires the PUC to, among other things, "[e]valuate the [State's RPS] every five [(5)] years, beginning in 2013, and may revise the

standards based [up]on the best information available at the time to determine if the standards established by [HRS §] 269-92 remain effective and achievable . . . ." HRS § 269-95(4) (Supp. 2012). Furthermore, the PUC shall report its findings and revisions to the Legislature with respect to the State's RPS based upon its own studies and other information no later than twenty (20) days prior to the convening of the 2014 legislative session and every five (5) years thereafter. HRS § 269-95(5) (Supp. 2012).

The Consumer Advocate agrees with the PUC that need for H.B. No. 80 appears to be premature at this time because, similar to the PUC's comments before this Committee in response to H.B. No. 80, the Consumer Advocate believes that the Legislature should have the benefit of the PUC's investigation and analysis required by HRS § 269-95(4) and (5) before the Legislature moves forward with the amendment to HRS § 269-92 contemplated in H.B. No. 80. The Consumer Advocate continues to believe that further refinement of the State's RPS goals should be undertaken with the benefit of supporting comprehensive technical and policy analysis spearheaded and overseen by the PUC.

Thank you for this opportunity to testify.

OCEAN RENEWABLE ENERGY COALITION
The Marine and Hydrokinetic Energy Trade Association

Testimony of Sean O'Neill
President
Ocean Renewable Energy Coalition
HB LRB 13-0223-1 HB80

On behalf of the Ocean Renewable Energy Coalition (OREC), I appreciate the opportunity to present my comments in support of HB LRB 13-0223-1, which will encourage the use of renewable energy and support the use of one of Hawaii's most abundant indigenous energy resources: wave power. OREC, founded in 2005, is the only national trade association dedicated exclusively to supporting renewable energy from our oceans and free flowing rivers. As a 501(c)(6) trade association, OREC promotes public policies and regulations that will encourage the responsible commercialization of ocean renewable energy.

About Ocean Energy

"Ocean renewable energy" and "marine and hydrokinetic energy" (MHK) are terms used to describe all forms of renewable energy derived from the sea, including wave energy, tidal energy, ocean current energy, offshore wind, salinity gradient energy, and ocean thermal gradient energy.

"Wave energy" describes energy generated from the power of waves near their surface, using devices placed in the water to convert the motion of the waves into electricity. In 2004, the Electric Power Research Institute (EPRI) identified all five Hawaii counties as potential sites for offshore wave power deployment, and showed that the wave energy available off the northern shores of the Islands "far exceeds the electricity demand of each of the Islands."[1] The lone exception is Oahu; due its large population, Oahu's available wave energy is "approximately equal" to the demand.[2] Because of this abundance, and the fact that Hawaii's energy costs are currently the highest in the nation (due to the state's dependence on imported oil and coal), the EPRI study concluded that "[i]f any state in the U.S. should be interested in using its natural wave energy resource, that state is Hawaii . . . ."[3]

While ocean energy facilities are already generating power in other countries, the United States is only beginning to acknowledge the importance of these resources. The ocean energy industry is on the cusp of commercialization in the United States; in 2012, the Federal Energy Regulatory Commission (FERC) issued its first four permits for MHK facilities, located in New York, Maine, Oregon, and Alaska.[4] With another 84 early-stage projects operating under

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[1] ELECTRIC POWER RESEARCH INSTITUTE, E2I EPRI SURVEY AND CHARACTERIZATION OF POTENTIAL OFFSHORE WAVE ENERGY SITES IN HAWAII 4 (2004), *available at* http://oceanenergy.epri.com/attachments/wave/reports/003_Hawaii_Site_Report_Rev_1.pdf.
[2] *Id.*
[3] *Id.* at 57.
[4] FEDERAL ENERGY REGULATORY COMMISSION, MARINE & HYDROKINETIC PROJECTS (2012), *available at* http://www.ferc.gov/industries/hydropower/gen-info/licensing/hydrokinetics/hydrokinetics-projects.pdf.

preliminary permits issued by FERC,[5] MHK is well-positioned for further growth in 2013 and beyond.

Benefits of Ocean Energy

One of wave energy's greatest benefits is its reliability. Other renewable energy sources, such as wind and solar power, are best suited for peak generation only, because of their intermittent nature. Wave activity, by comparison, can be easily forecasted 24 to 48 hours in advance, and has less short-term variability. This predictability makes wave energy less intermittent, which in turn gives it the potential to be used as a source of baseload power generation.

Wave energy can also be a source of distributed generation, because it can be generated very close to Hawaii's population centers and has few negative externalities (e.g., zero emissions). Rather than using a large, central generation facility, a distributed generation network takes advantage of many small systems placed throughout a region. Distributed generation is advantageous because it makes power more accessible to customers in remote areas of the grid, and secures the energy supply by being less susceptible to large-scale outages (i.e., less concern if one facility breaks down).

In addition to its accessibility and security benefits, distributed generation takes advantage of three important economic efficiencies. First, because the systems can be located all over the grid, in close proximity to populated areas, transmission and distribution costs can be greatly reduced. Second, the small facilities used for distributed generation can be mass-produced (unlike centralized power plants, which are usually "one-off" custom construction projects). Third, improved distributed generation like wave power and associated control technologies are creating volt-amp-reactive (VAR) support that can be used to enhance the voltage regulation and stability of local grids. Locating VAR support near the point of consumption, reducing step size, and making the control active all improve the performance of the grid.

HB LRB 13-0223-1's Impact

HB LRB 13-0223-1 would allow the Hawaii Public Utilities Commission (PUC) to "give preference to renewable energy resources that reduce or eliminate the amount of fossil fuel used in the generation of renewable energy and result in reduced energy transmission volatility" when developing renewable portfolio standards for the State of Hawaii.[6] Because MHK meets both

[5] *Id.* For a list of these projects, see FEDERAL ENERGY REGULATORY COMMISSION, ISSUED HYDROKINETIC PRELIMINARY PERMITS (2012), *available at* www.ferc.gov/industries/hydropower/gen-info/licensing/hydrokinetics/permits-issued.xls.

[6] A Bill for an Act Relating to Renewable Portfolio Standards, Haw. HB LRB 13-0223-1 (2013).

criteria, this small statutory change would help the PUC encourage wave energy development in Hawaii.

First, the proposed legislation would prioritize renewable sources that reduce dependence on fossil fuels while simultaneously enhancing grid reliability and reducing transmission costs. As discussed above, MHK accomplishes both of these goals.

Second, by focusing on the benefits that technologies like MHK can provide (rather than simply deferring to the lowest-cost renewables), the legislation would ensure that MHK can retain a share of renewable credits, which would in turn encourage development and bring MHK even closer to widespread commercialization.

Thank you for this opportunity to share our perspective on this important bill. Thank you also for your hard work and dedication.

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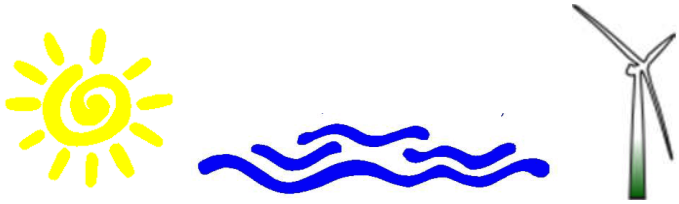

LIFE OF THE LAND

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COMMITTEE ON ENERGY & ENVIRONMENTAL PROTECTION
Rep. Chris Lee, Chair
Rep. Cynthia Thielen, Vice Chair

DATE: Tuesday, February 05, 2013
TIME: 8:30 AM
PLACE: Conference Room 325

HB 80 RPS **SUPPORT WITH AMENDMENT**

Aloha Chair Lee, Vice Chair Thielen and Members of the Committee

My name is Henry Curtis and I am the Executive Director of Life of the Land, Hawai`i's own energy, environmental and community action group advocating for the people and `aina for over four decades. 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.

State law encourages the use of renewable energy as if renewable energy is golden and fossil fuel is bad. In reality, all forms of energy generation have positive and negative economic, political, social, environmental and cultural impacts. Some renewable energy projects considered by Hawai`i utilities have negative impacts that make **coal** look good.

Currently the price of renewable energy includes the transmission system upgrades needed to integrate it, but excludes the system operation costs needed to manage it. This distorts the true cost of renewable energy, just as the cost of fossil fuel is distorted by not including the financial and planetary damage done by climate change.

To truly appreciate different types of energy one must look at all of the major impacts.

Regulators need to be able to preferentially choose one type of resource, or one particular application of a resource.

There is a difference between one central station solar energy plant and 5000 distributed solar systems, even if they have identical total output.

This bill proposes that the Commission should be able to weigh options based on reducing volatility and its implied lower costs.

The bill should be amended as follows:

When establishing the standards, the commission may give preference to renewable energy resources that (a) reduce or eliminate the amount of fossil fuel used in the generation of the renewable energy, (b) result in lower system costs due to reduced energy transmission volatility; and (c) have lower life cycle greenhouse gas emission impacts."



HOUSE COMMITTEE ON ENERGY & ENVIRONMENTAL PROTECTION
February 5, 2013, 8:30 A.M.
Room 325
(Testimony is 1 page long)

TESTIMONY OFFERING COMMENTS ON HB 80

Chair Lee and members of the Energy & Environmental Protection Committee:

The Blue Planet Foundation offers the following comments on HB 80, which authorizes the PUC to give preference to renewable energy resources that reduce or eliminate the use of fossil fuel and result in reduced volatility when establishing renewable portfolio standards.

House Bill 80 clarifies a preference for renewable energy resources that reduce or eliminate fossil fuel consumption. Such a clarification can help to ensure that Hawaii's transition to renewable energy does not yield illusory progress. Blue Planet strongly supports this effort.

However, Blue Planet also supports a diverse portfolio of renewable energy resources. The proposed HB 80 language, providing a specific preference for resources that "result in reduced energy transmission volatility," could potentially be misread to provide a preference for "firm" or "baseload" power. The baseload paradigm is antiquated. Our energy future will be based on dynamic power, from both a supply and demand perspective. Already, this shift is making power sources such as wind and solar energy more "firm" in the traditional sense. Indeed, this is likely what HB 80 means with a preference for "reduced energy transmission volatility." We believe that caution should be exercised if the language in HB can be erroneously used to support an antiquated model of power generation and supply. This caution could be reflected by a statement of legislative intent clarifying that "reduced energy transmission volatility" should not be misunderstood to prefer traditional models of dispatchable firm baseload power over modern energy resources and strategies that reduce or eliminate fossil fuel consumption.

Thank you for the opportunity to provide comments on this measure.

info@blueplanetfoundation.org
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Attention:
Rep. Angus McKelvey, Chair of Consumer Protection and Commerce Committee
Rep. Chris Lee, Chair of Energy and Environmental Protection Committee

Date: 11th January 2013

Reference: HB LRB 13-0223-1 HB 80
Oceanlinx Ref: AB/PR/110

Dear Committee Chairs,

Oceanlinx Limited is an Australian wave energy technology company which has developed a commercial system to convert the energy in ocean waves into electricity. The technology uses no fossil fuels at all. The company has successfully demonstrated its technology in a number of prior projects, and is currently implementing its first full-scale commercial project in South Australia.

The Oceanlinx technology is considered to be "firm power". State-of-the-art technology, including the use of NOAA satellites, allows variations to power output from an Oceanlinx device to be forecast well in advance. This allows utilities like HECO to adjust their load requirements and drastically reduce energy transmission volatility.

Oceanlinx strongly supports the bill proposed to be put before the Hawaii Legislature, authorizing the PUC to give preference to renewable energy. This bill will greatly enhance and fast-track the potential for wave energy to provide a meaningful reduction in the use of fossil fuels in Hawaii.

Yours Faithfully,

Ali Baghaei
CEO & MD

CC: Dr Tom Denniss

TESTIMONY OF WARREN BOLLMEIER ON BEHALF OF THE
HAWAII RENEWABLE ENERGY ALLIANCE BEFORE THE
HOUSE COMMITTEE ON ENERGY AND ENVIRONMENTAL PROTECTION

HB 80, RELATING TO RENEWABLE PORTFOLIO STANDARDS

February 5, 2013

Chair Lee, Vice-Chair Thielen, and members of the Committee, I am Warren Bollmeier, testifying on behalf of the Hawaii Renewable Energy Alliance (HREA). HREA is an industry-based, nonprofit corporation in Hawaii established in 1995. Our mission is to support, through education and advocacy, the use of renewables for a sustainable, energy-efficient, environmentally-friendly, economically- sound future for Hawaii. One of our goals is to support appropriate policy changes in state and local government, the Public Utilities Commission and the electric utilities to encourage increased use of renewables in Hawaii.

The purpose of HB 80 is to authorize the PUC to give preference to renewable energy resources that reduce or eliminate the use of fossil fuel and result in reduced volatility when establishing renewable portfolio standards.

HREA **strongly supports** this measure and offers the following comments in support:

1) Clean Energy Goals. This measure will support attainment of our clean energy goals; and

2) Recommendation. We recommend changing the "may" in line 18 of page 2 of the measure to "shall." By changing the "may" to "shall," the Legislature will send the message to the PUC and the utilities that WE are SERIOUS about getting off of fossil fuels. That said, the Committee should also consider changing the "may" to "shall" in the first sentence of §269-27.2 (b).

Mahalo for this opportunity

thielen3 - Charles

From: mailinglist@capitol.hawaii.gov
Sent: Saturday, February 02, 2013 12:22 PM
To: EEPtestimony
Cc: mendezj@hawaii.edu
Subject: *Submitted testimony for HB80 on Feb 5, 2013 08:30AM*

HB80
Submitted on: 2/2/2013
Testimony for EEP on Feb 5, 2013 08:30AM in Conference Room 325

Submitted By	Organization	Testifier Position	Present at Hearing
Javier Mendez-Alvarez	Individual	Support	No

Comments:

Please note that testimony submitted less than 24 hours prior to the hearing , improperly identified, or directed to the incorrect office, may not be posted online or distributed to the committee prior to the convening of the public hearing.

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thielen3 - Charles

From: mailinglist@capitol.hawaii.gov
Sent: Sunday, February 03, 2013 10:13 PM
To: EEPtestimony
Cc: wendellkaneohe@hotmail.com
Subject: Submitted testimony for HB80 on Feb 5, 2013 08:30AM

HB80
Submitted on: 2/3/2013
Testimony for EEP on Feb 5, 2013 08:30AM in Conference Room 325

Submitted By	Organization	Testifier Position	Present at Hearing
Wendell Lum	Individual	Support	Yes

Comments: I'm very surprised that the State of Hawaii and the University of Hawaii is lacking in knowledge about a new class of distributed power generator that is now producing clean, reliable, affordable electricity at the customer's site using clean natural gas or directed biogas. It is a patented solid oxide fuel cell technology that today can provide 200kW of power and much more in commercial and industrial construction today in the footprint of a standard parking spaces. It is also used outside the grid and wireless.

Please note that testimony submitted less than 24 hours prior to the hearing , improperly identified, or directed to the incorrect office, may not be posted online or distributed to the committee prior to the convening of the public hearing.

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