SB2820

RELATING TO RENEWABLE ENERGY

DAVID Y. IGE
GOVERNOR

Testimony by:
FORD N. FUCHIGAMI
DIRECTOR

Deputy Directors
JADE T. BUTAY
ROSS M. HIGASHI
EDWIN H. SNIFFEN
DARRELL T. YOUNG

IN REPLY REFER TO:

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
869 PUNCHBOWL STREET
HONOLULU, HAWAII 96813-5097

February 11, 2016
2:48 p.m.
State Capitol, Room 229

S.B. 2820
RELATING TO RENEWABLE ENERGY

Senate Committee(s) on Transportation and Energy
& Commerce, Consumer Protection and Health

The Department of Transportation (DOT) **strongly supports** the passage of S.B. 2820. This Administration bill meets the objectives of Hawaii's renewable energy goals by amending the definition of renewable portfolio standard to more accurately reflect the percentage of renewable energy penetration in the State.

We need policies that promote renewable energy, improve environmental sustainability, and reduce our dependence on foreign oil.

Thank you for the opportunity to testify on this bill.

DAVID Y. IGE
GOVERNOR

LUIS P. SALAVERIA
DIRECTOR

MARY ALICE EVANS
DEPUTY DIRECTOR

DEPARTMENT OF BUSINESS, ECONOMIC DEVELOPMENT & TOURISM

No. 1 Capitol District Building, 250 South Hotel Street, 5th Floor, Honolulu, Hawaii 96813
Mailing Address: P.O. Box 2359, Honolulu, Hawaii 96804
Web site: www.hawaii.gov/dbedt

Telephone: (808) 586-2355
Fax: (808) 586-2377

Statement of
LUIS P. SALAVERIA
Director
Department of Business, Economic Development, and Tourism
before the
SENATE COMMITTEES ON TRANSPORTATION AND ENERGY
and
COMMERCE, CONSUMER PROTECTION, AND HEALTH
Thursday, February 11, 2016
2:48p.m.
State Capitol, Conference Room 229
in consideration of
SB 2820
RELATING TO RENEWABLE ENERGY.

Chairs Inouye and Baker, Vice Chairs Gabbard and Kidani, and Members of the Committees.

The Department of Business, Economic Development, and Tourism (DBEDT) supports Administrative bill SB 2820, which modifies the definition of "renewable portfolio standard" by basing it on electrical energy 'generation' instead of 'sales' in order to more accurately reflect the percentage of renewable energy penetration in the State.

To fully meet the objectives of Act 97, Session Laws of Hawaii (SLH) 2015, establishing the 100 percent renewable portfolio standard (RPS) by 2045 and Act 38, SLH 2015, aspiring for greater energy security and self-sufficiency through the reduction and ultimate elimination of Hawaii's dependence on imported fuels for electrical generation, an accurate method for calculating RPS must be used to accurately represent the percentage of renewable energy penetration in Hawaii.

DBEDT and other energy stakeholders understand the current method of calculating RPS is flawed as it is incongruent to compare 'generation' to 'sales' which causes the RPS to be inflated due to two fundamental reasons: (1) the current RPS excludes from the denominator customer-sited, grid-connected renewable energy and non-renewable energy generated; and (2) electrical energy sales do not include transmission and distribution (T&D) energy losses that occur between the points of electrical energy generation and the customer meter where sales are measured.

This measure is intended to remedy these issues, and DBEDT welcomes any additional feedback that may serve to fulfill the intent of providing a completely transparent and accurate representation of the State's progress towards our 100 percent renewable objective in the utility sector.

Thank you for the opportunity to offer these comments in support of SB 2820.

TESTIMONY OF RANDY IWASE
CHAIR, PUBLIC UTILITIES COMMISSION
STATE OF HAWAII
TO THE
SENATE COMMITTEES ON
TRANSPORTATION AND ENERGY
&
COMMERCE, CONSUMER PROTECTION, AND HEALTH

February 11, 2016
2:48 PM

MEASURE: S.B. No. 2820
TITLE: RELATING TO RENEWABLE ENERGY

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

DESCRIPTION:

This measure amends the current definition of "Renewable portfolio standard" to mean the percentage of electrical energy *generation* that is represented by renewable energy rather than the percentage of electrical energy *sales* that is represented by renewable energy.

POSITION:

The Commission offers the following comments for the Committees' consideration.

COMMENTS:

The Commission notes that the term "electrical energy sales" is currently represented by a definite figure that is regularly reported by the utility. It is unclear to the Commission how the term "electrical energy generation" would be calculated and reported. The Commission is currently collaborating with DBEDT and other stakeholders on language to address these issues.

Thank you for the opportunity to testify on this measure.

Testimony before the
Senate Committees on Transportation and Energy and
Commerce, Consumer Protection and Health

February 11, 2016, 2:48 pm
Conference Room 229

S.B. 2820 – Relating to Renewable Energy

By Scott Seu
Vice President, System Operation
Hawaiian Electric Company, Inc.

Chairs Inouye & Baker, Vice-Chairs Gabbard & Kidani and Members of the Committees:

My name is Scott Seu. I am Vice President for System Operation at Hawaiian Electric Company. I am testifying on behalf of Hawaiian Electric and its subsidiary utilities, Maui Electric and Hawaii Electric Light (collectively "Companies").

Last year, the Hawaiian Electric Companies supported the passing of the new 100% RPS law, and we remain fully committed to moving our generation resources, and the resources of those with whom we contract for electricity generation, to be completely off of fossil fuels by 2045. While we appreciate the intent of this measure to revise the mathematics of the renewable portfolio standard ("RPS") to more accurately reflect progress towards the state's goal of moving off of fossil fuels for all electricity generation, we cannot support this bill as drafted.

First, the proposed changes to the RPS do not fully consider the implications of when customers generate their own electricity with fossil fuels. Although the proposed revised RPS calculation in its simplest form – total amount of generation from renewables divided by total amount of generation – is mathematically correct, it does not take into account the fact that more and more large customers are being presented with options to self-generate their electricity using fossil fuels.

Consider the not-too-distant scenario where the utility and its contracted independent power producers have successfully transitioned themselves to generating 100% of their electricity with renewables. But in the meantime, large commercial customers – hotels, schools, hospitals, government entities – have invested in or contracted with third party providers for fossil fuel -fired generation, just as is being actively marketed now around town whether it is in the form of self-supply contracts, combined heat and power units, or microgrids. The utility has no control over this customer generation, and furthermore, if the amount of customer fossil generation increases, then the utility and independent power producers must correspondingly decrease their production of renewable energy. At this point, RPS actually decreases rather than increases. The attachment to this testimony illustrates how this might happen.

Thus, as long as customer generation from fossil fuels is allowed to expand without some sort of oversight or accountability, then the RPS and the state's clean energy policy

have a major gap. Furthermore, since under the RPS law it is the utility that is held accountable for achieving the RPS, our ability to fully meet our compliance obligations becomes increasingly beyond our control, and that is neither fair nor rational.

Note that we are not suggesting that customer generation be removed from the RPS. The RPS was purposely amended in 2011 to include grid-connected customer renewable electric generation, with the support of the PUC, DBEDT, and Hawaiian Electric. It was recognized that doing so would strengthen the utilities' incentive to support customer renewable energy generation, and that has indeed borne fruit.

Our other concern is that the bill does not make corresponding adjustments to the utility's RPS targets that account for the change in methodology. Using the existing methodology we were at approximately 21% RPS at the end of 2014, and it was on this basis that the legislature increased our 2020 RPS requirement to 30% with our support. If the new methodology is adopted, then new interim RPS targets need to be determined. To be clear, we are committed to the state's goal of moving off of fossil fuels for all electricity generation.

Fixing the math of the current RPS makes sense, but it must also be updated to align with market realities and public policy. Accordingly, we respectfully ask that this bill be amended to address these concerns. We would be happy to work with DBEDT and others to explore alternatives.

Thank you for this opportunity to testify.

Proposed RPS Equation of SB 2820:

$$RPS = \frac{\text{Total Renewable Energy Generation}}{\text{Total Energy Generation both Fossil and Renewable}}$$

$$= \frac{\text{Utility Renewables + Utility-Contracted Renewables}}{\text{Utility Fossil and Renewables + Utility-Contracted Fossil and Re}}$$

		Year A	Year B	Year C	Year D	Yea
Utility and Contracted						
	Renewable		10	15	20	25
	Fossil		75	60	45	30
Customer						
	Renewable		10	15	20	25
	Fossil		5	10	15	20
	Total		100	100	100	100
	RPS		**20.0%**	**30.0%**	**40.0%**	**50.0%**

Assume total generation on island is constant, no curtailment of customer generation, and steady incremental growth of 5 units in all generation sectors except utility fossil

blue planet FOUNDATION



SENATE COMMITTEE ON TRANSPORTATION AND ENERGY
SENATE COMMITTEE ON COMMERCE, CONSUMER PROTECTION, AND HEALTH
February 11, 2016, 2:48 P.M.
Room 229
(Testimony is 1 page long)

TESTIMONY IN SUPPORT OF SB 2820, WITH COMMENTS

Aloha Chairs Inouye and Baker, and members of the committees:

Blue Planet Foundation supports SB 2820, which would implement an accounting correction for the state's renewable portfolio standard ("RPS") calculation. Presently, 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. SB 2820 would revise the RPS accounting calculation to address this outcome.

Blue Planet wishes to clarify that the present legal impact of this accounting issue is limited. As an example, for 2014 the Hawaiian Electric Companies RPS was calculated at 21.3%. From information reported by the Hawaii Electric Companies, the actual amount of renewable energy as a percentage of the total energy was 19.2%. While this difference of approximately 2% renewable energy represents a significant and important amount of clean energy, the accounting differential did not impact the Hawaiian Electric Companies' achievement of the law's RPS target. In other words, the companies would have met the statutory minimum RPS target[1] with or without the accounting correction in SB 2820. However, in future years, as the amount of distributed rooftop solar generation continues to grow, this accounting inaccuracy will grow in magnitude. **Thus, the correction in SB 2820 is appropriate and necessary.** Nonetheless, the RPS "double credit" provides a small incentive for utilities to refrain from blocking their customers from interconnecting rooftop solar systems. If the Committee is reluctant to implement the accounting correction immediately, it may consider implementing the new RPS calculation after some period of time, thus retaining this small rooftop solar incentive during the interim. For example, the Committee could consider amending the bill to implement the SB 2820 accounting correction beginning after the 2020 RPS target of 30%.

Thank you for the opportunity to testify.

---

[1] Under H.R.S. § 269-92, utilities were required to achieve 10% RPS by 2010, and 15% by 2015.

info@blueplanetfoundation.org
55 Merchant Street 17th Floor • Honolulu, Hawai'i 96813 • 808-954-6142 • blueplanetfoundation.org

Before the Senate Committees on Transportation and Energy &
Commerce, Consumer Protection, and Health
Thursday, February 11, 2016, 2:48 p.m., Room 229
SB 2820: RELATING TO RENEWABLE ENERGY

Aloha Chairs Inouye and Baker, Vice Chairs Gabbard and Kidani, and members of the Committees,

On behalf of the Distributed Energy Resources Council of Hawaii ("DER Council"), I would like to testify in strong support for SB 2820, which amends the renewable energy portfolio ("RPS") to more accurately reflect the amount of renewable energy generation in Hawaii based upon electricity generation rather than electricity sales. The DER Council is a nonprofit trade organization formed to assist with the development of distributed energy resources and smart grid technologies to support an affordable, reliable, and sustainable energy supply for Hawaii.

Last year, the Hawaii state legislature amended the RPS from 40% renewables for electricity generation by 2030 to 100% renewables for electricity generation by 2045. Most people and even some stakeholders who have worked closely on these issues mistakenly believe that 100% renewables by 2045 as per our current accounting for the RPS literally means that 100% of all energy generated and sold in Hawaii will come from renewable generation. Instead, because the current language in the RPS is calculated by dividing the total amount of renewable generation (which could include utility scale and roof top generation) by the total sales of energy, the state's RPS could actually meet the 100% mandate, but still generate some electricity from fossil fuels. In fact, the more roof top generation that is included in the calculation, the greater the amount of fossil fuels that could be included in the RPS at 100%.

The DER Council supports SB 2820 because the proposed amendment clarifies the accounting for the RPS by basing the entire RPS upon electricity generation, and in this way ensures that the RPS will reflect what most think that it already means: a complete independence from imported fossil fuels by 2045.

Thank you for the opportunity to testify

Leslie Cole-Brooks
Executive Director
DER Council of Hawaii

Hawaii Solar Energy Association
Serving Hawaii Since 1977

TESTIMONY OF THE HAWAII SOLAR ENERGY ASSOCIATION IN REGARD TO SB 2820, RELATING TO RENEWABLE ENERGY BEFORE THE SENATE COMMITTEE ON TRANSPORTATION AND ENERGY ON THURSDAY FEBRUARY 11, 2016

Chair Inouye, Vice-Chair Gabbard and members of the committee, my name is Hajime Alabanza, and I represent the Hawaii Solar Energy Association, Inc. (HSEA)

HSEA supports SB 2820. This bill amends §269-91 to redefine "Renewable Portfolio Standard" to mean the percentage of electrical energy generation that is represented by renewable energy.

Hawaii's 100% renewable portfolio standard goal is unprecedented in United States history. As such, it is important to accurately define what may otherwise be seen as mundane details when calculating progress towards this goal. SB 2820 mentions that "electrical energy sales" does not include losses "that occur between the points of electrical energy generation and the customer meter". When calculating the true amount of renewable energy that is actually installed in Hawaii, generation would give a more accurate figure.

In addition, including language that further clarifies the meaning of "generation" may also be warranted. Does this refer to the AC value of energy on the meter side of the generator? If so, the language may need to be expanded.

Thank you for the opportunity to testify.

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