

SB 612

RELATING TO CURTAILMENT.

Amends sections 269-27.1 and 269-27.2, HRS, to require agreements to purchase geothermal and nonfossil fuel generated electricity to contain provisions that provide independent power producers with compensation for excessive curtailment

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

FEBRUARY 5, 2013

2:45 p.m.

MEASURE: S.B. No. 612

TITLE: Relating to Curtailment

Chair Gabbard and Members of the Committee:

DESCRIPTION:

This measure would require electric utility companies entering into power purchase agreements ("PPA") with independent power producers ("IPP") for renewable energy – in particular geothermal and nonfossil fuel resources – to be compensated for excess curtailment or interruption over and above an agreed to minimum energy usage amount. S.B. No. 612 sets out a formula to determine the amount each IPP should be compensated for excess curtailment or interruption.

POSITION:

The Commission supports the intent of this measure to maximize the State's use of electricity generated from renewable energy resources but strongly believes that contractual issues should not be in statute.

COMMENTS:

The assertions made in Section 1 of this bill are an oversimplification of the numerous issues affecting the maximum integration of renewable resources on our island grids and the negotiation of new PPAs. To better understand the many factors affecting PPA pricing, the Commission asks the Legislature to first consider the passage of S.B. No.

1043, relating to electricity producers.¹ S.B. No. 1043 would give the Commission the authority to obtain all relevant information concerning negotiated PPAs pending the Commission's approval, including cost information to get a complete understanding of the actual costs and pricing for renewable energy projects negotiated under a PPA so as to ensure pricing and conditions are just and fair to the utility and subsequently, the electricity ratepayer, and the IPP by minimizing investment risk by reducing volume uncertainty.

As a general principle, the Commission would prefer that issues affecting the economic dispatch of generating units, which includes curtailment, are addressed through existing regulatory procedures and not mandated through statute. Standardized and/or negotiated contracts and operational conditions can change very quickly as technology evolves. Statutory mandates may not allow for timely and appropriate responses and may cause inadvertent consequences with unnecessary additional costs thrust upon the ratepayer.

Recent power purchase agreements for wind power producers have included innovative tier pricing to incentivize more use of wind. In tier pricing, the cost of electricity sold to the utility, and paid by ratepayers, decreases as the utility integrates more electricity from the IPP. The potential cost savings to be realized by accessing the lowest cost electricity from these types of projects are significant and offer benefits to all parties. With the cost differential between existing oil-fired generation and the lowest cost renewable power, utilities can justify necessary investments in the grid to reliably use this power. IPPs can earn additional revenue by increasing electricity sales and remaining fuel cost savings are passed on to the ratepayer.

As a final note, the Commission is working with interested Legislators to support proper energy incentive mechanisms that will allow utilities, ratepayers, and IPPs to share in the savings achieved by displacing higher cost oil-fired generation with generation from lower cost renewable energy.

Thank you for the opportunity to testify on this measure.

¹S.B. No. 1043 is scheduled for hearing by the Senate Committee on Commerce & Consumer Protection on Thursday, February 14, 2013 at 9:00 a.m.



Hawaii Solar Energy Association
Serving Hawaii Since 1977

Before the Senate Committee on Energy and the Environment
February 5, 2013, 2:45 PM, Conference Room 225
SB 612: RELATING TO CURTAILMENT

Aloha Chair Gabbard, Vice-Chair Ruderman, and members of the Senate Committee on Energy and the Environment,

On behalf of the Hawaii Solar Energy Association (HSEA), I would like to testify **in support of SB 612**, which requires that agreements to purchase geothermal and non-fossil fuel generated electricity contain provisions that would provide independent power producers with compensation for excessive curtailment. HSEA is a non-profit trade organization that has been advocating for solar energy since 1977, with an emphasis on residential distributed generation and commercial for both solar hot water (SHW) and photovoltaics (PV). We currently represent 71 companies, and our members include installers, contractors, manufacturers, distributors, the utility, and others. With 35 years of advocacy behind us, HSEA's goal is to work for a sustainable energy future for all of Hawaii.

Renewable energy is key to Hawaii's green energy future

As we all know, Hawaii is dangerously dependent upon imported fossil fuels, and the cost and uncertainty of fossil fuel availability will only increase. Recent reports have indicated that oil may reach \$180/barrel or more by 2020, and transforming our electrical grid to a green energy infrastructure will bring both added security and stability to our state's economy, and contribute to an overall reduction in greenhouse gasses for everyone.

Utility contracts should have clear curtailment limits to aid in contract negotiation

Utility scale projects contend with a variety of barriers, from long lead times for permitting to challenges finding investors. Added to these challenges is the uncertainty over the amount of curtailment an installation can expect over the life of a project. Since utility scale projects are paid on the power they produce, unexpected curtailment can wreck havoc with the project's operating expenses. This legislation reduces that uncertainty by mandating that the utility and power producer agree upon a set curtailment. These mutually agreed upon limits would give both parties the power to negotiate a contract based on more realistic goals, which would benefit the power producer, the utility, and ultimately the utility customer who would no longer pay the price of inflated costs based upon future uncertainty.

Thank you for the opportunity to testify.

Leslie Cole-Brooks
Executive Director
Hawaii Solar Energy Association



LIFE OF THE LAND

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COMMITTEE ON ENERGY AND ENVIRONMENT

Senator Mike Gabbard, Chair

Senator Russell E. Ruderman, Vice Chair

DATE: Tuesday, February 5, 2013

TIME: 2:45 p.m.

PLACE: Conference Room 225

SB 612 CURTAILMENT **SUPPORT**

Aloha Chair Gabbard, Vice Chair Ruderman 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.

SB 612 amends sections 269-27.1 and 269-27.2, HRS, to require agreements to purchase geothermal and nonfossil fuel generated electricity to contain provisions that provide independent power producers with compensation for excessive curtailment.

The number of hours of curtailment is a proxy for available renewable energy that is curtailed. A more accurate measure is the kilowatt-hours of energy that was curtailed. The utility and Independent Power Producers have the ability to determine this amount. This approach is especially significant for wind because curtailment often occurs when the wind is the strongest.



Sierra Club Hawai'i Chapter

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SENATE COMMITTEE ON ENERGY AND ENVIRONMENT

February 5, 2013, 2:45 P.M.
(Testimony is 1 page long)

TESTIMONY IN SUPPORT OF SB 612

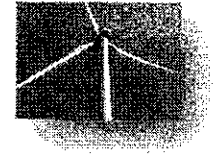
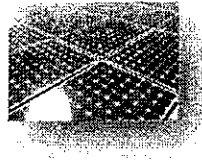
Aloha Chair Gabbard and Members of the Committee:

The Sierra Club, Hawai'i Chapter, with 10,000 dues-paying members and supporters, *supports* SB 612. This measure would require a utility and an independent power purchaser to negotiate in the power purchase agreement the amount of curtailment that could occur.

Uncertainty is the bane of good business transactions. When a power purchase provider is forced to guess at the amount of electricity that they may or may not be able to sell, that uncertainty is reflected in higher rates. By forcing this term to be negotiated, the power purchase provider will have certainty which, hopefully, will result in lower prices to consumers.

Moreover, it simply is good policy to place the "risk" of curtailment on the utility. Only the utility can influence the rate of curtailment through investments in smart grid technology, making existing power plants more efficient, and adjusting customer behavior. This measure would incentivize maximizing the amount of renewable energy brought onto the grid.

Mahalo for the opportunity to testify.



SENATE COMMITTEE ON ENERGY AND ENVIRONMENT

February 5, 2013, 2:45 P.M.

Room 225

(Testimony is 2 pages long)

TESTIMONY IN STRONG SUPPORT OF SB 612

Chair Gabbard, Vice-Chair Rudeman, and members of the Committee:

The Blue Planet Foundation strongly supports SB 612, a measure which seeks to encourage greater amounts of renewable energy use by reducing the curtailment of renewable energy sold to public utilities. This measure should also decrease the cost of renewable energy by reducing curtailment risk to independent renewable energy producers.

Curtailment of renewable energy resources is a significant barrier to Hawaii's clean energy future. Hawaii's largest electric utility company is essentially allowed to curtail renewable energy facilities without limit and without compensation. This not only directly limits the amount of renewable energy on the grid, it has a chilling effect on the ability to finance clean energy projects in Hawaii. With the threat of uncertain amounts of curtailment, developers are unable to properly evaluate financial risk. Absent reasonable certainty concerning financial risk, projects are unable to go forward. While it is difficult to eliminate all curtailment (such as curtailment necessary for reliability or technical issues), curtailment for economic reasons should be prohibited and other curtailment should be minimized.

This measure establishes reasonably certain parameters (such as maximum hours of curtailment limits and payment amounts) in power purchase agreements that allow developers and investors to properly evaluate risk and potentially move forward with financing and developing projects.

These changes are consistent with past applications before the Public Utilities Commission (PUC) involving power purchase agreements for solar PV facilities. For example, in Docket No. 2010-0307, the application includes language establishing limits and requiring the utility to

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provide appropriate compensation for curtailed energy¹. Pursuant to this language, the utility agrees that it shall not be entitled to curtail the solar PV facility for more than a maximum of ninety hours per calendar year. If the utility curtails the facility in excess of the maximum amount, the facility shall be entitled to receive payment for 1.25 MWhs of curtailed energy for each hour curtailed from 8:00 AM to 7:00 PM². These types of “floor” provisions on curtailment should be included in all future power purchase agreements.

With the requirement to pay for curtailed energy, system operators will likely curtail facilities more judiciously. The payment requirement will also incent utilities to further embrace curtailment mitigation measures.

Thank you for this opportunity to testify.

¹ See Application (Docket No. 2010-0307) filed Nov. 8, 2010 (“Application”) at Exhibit 1, pp. 11-12.

² Actual language from the power purchase agreement: “The Parties agree that, regardless of the basis, the Cooperative shall not be entitled to curtail the Seller’s Facility for more than a maximum 90 hours per calendar year. If and to the extent the cooperative curtails the Seller’s Facility in excess of the maximum amount set forth above or otherwise in violation of this Section 15(c), then the then the Seller shall be entitled to receive payment for 1.25 MWhs of curtailed energy for each hour (or a pro-rated amount based on 60 minutes per hour if less than an hour) curtailed from 8am - 7pm (reduced by one-half of one percent (0.5%) per year to account for annual degradation from Sellers Facility) and the Cooperative shall pay Seller for the curtailed energy in accordance with Appendix B subject to the Dispute Resolution procedures of Appendix E. For the avoidance of doubt, the Parties agree that, in practice, the actual curtailments by the Cooperative could be substantially less than the maximum 90 hours per calendar year.”



Indigenous Consultants, LLC

Mililani B. Trask, Principal

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Date: Wednesday, February 5, 2013
Time: 2:45 PM
Place: Conference Room 225
Committees: ENE, CPN



Re: SB 612 Relating to Curtailment

IDG | INNOVATIONS
DEVELOPMENT
GROUP

Aloha Legislators,

The Indigenous Consultants (IC) is a Hawaii based, indigenous LLC owned and operated by Native Hawaiians. It was created to assist indigenous peoples in developing their renewable energy resources in ways that are: Culturally appropriate, environmentally green and sustainable, socially responsible and economically equitable and affordable. For several years the IC has worked with Innovations Development Group in New Zealand and indigenous Maori developing geothermal resources, which are trust assets of Maori Land Trusts. In addition, the IC has acted as a consultant to other indigenous people in Hawaii and Asia who are addressing development of their trust renewable energy resources in ways that directly benefit their people, bring in revenues, create small business opportunities and ensure fair & affordable rates to consumers, including themselves and their communities.

The Innovations Development Group (IDG) is a Hawaii based renewable energy Development Corporation owned by Native Hawaiians. It was created to facilitate the development of renewable energy resources of native people, and in summer 2011 presented its development model to legislators of the Energy & Land Committees.

The Innovations Development Group and Indigenous Consultants support this measure.

IC and IDG strongly support this measure because it provides geothermal energy producers with certainty when they enter into a Power Purchase Agreements (PPA's) with HELCO or its subsidiaries. In the past, the HECO group has issued PPA's for the purchase of a specified amount of geothermal energy, but has later diminished the amount of geo-energy in favor of energy from bio-fuels.

This has had 3 significant NEGATIVE impacts on the energy sector as well as the consumers & ratepayers in Hawaii:

1. It results in increased rates for ratepayers because geo-energy is produced at a lower rate (more affordable rate) than biofuels;
2. It undermines the stability of the economic venture for geothermal energy producers & investors because they rely on the terms of the PPA to plan for & determine their production schedule as well as their financial projections for the project. When the HECO group "changes horses in mid-steam" by curtailing or cutting back on its commitment for geothermal energy and substituting other energy sources such as biofuel, It means that expected revenues will diminish and financial obligations of the producer will not be met as planned; and
3. It allows the HECO group to escape their contractual obligations to energy producers and also allows the HECO group to delay the closure of their fossil fuel (& biofuel) plants in favor of plants that can interface with geothermal sources of energy. The HECO group has purposefully delayed taking their old plants off line because they do not want to upgrade the grid to interface with other sources of energy. This practice is contrary to the intent & goals of the HCEI.

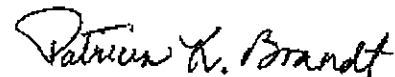
This measure is badly needed to bring accountability to the HECO group and to prevent them from further manipulating Hawaii's Energy sector.

Regards,



Mililani B. Trask – Indigenous Consultants LLC

Sincerely,



Patricia K. Brandt
CEO IDG Hawaii

**Testimony before the
Senate Committee on Energy and Environment**

S.B. 612 -- Relating to Curtailment

**Tuesday, February 5, 2013
2:45 pm, Conference Room 225**

**By Barry Nakamoto
Manager, Renewable Acquisition
Hawaiian Electric Company, Inc.**

Chair Gabbard, Vice-Chair Ruderman and Members of the Committee:

My name is Barry Nakamoto. I am the Manager of the Renewable Acquisition Department at Hawaiian Electric Company. I am testifying on behalf of Hawaiian Electric Company and its subsidiary utilities, Maui Electric Company and Hawaii Electric Light Company.

Hawaiian Electric does not support S.B. 612 on the basis that restricting the electric utility's ability to curtail energy from independent power producers, regardless of whether they are fossil or non-fossil fueled, could have serious adverse consequences to customer costs and the reliability of the electric grid. The Hawaiian Electric Companies fully recognize the need to balance the concerns of the developers to make a reasonable profit with the needs of customers, who shouldn't be required to pay for energy that they don't use.

Unlike the mainland, Hawaii is not interconnected to adjacent grids. This requires the utility to maintain the ability to curtail excess electrical energy output during periods where the supply of electrical generating facilities, regardless of fuel type or ownership, exceeds the demand for electricity by our customers. Taking away the utility's ability to manage the delicate balance of supply and demand will have adverse impacts to reliability and grid stability.

In addition, the utility must have the ability to curtail energy output from generating facilities during periods required for maintenance and safety. For example, if a transmission

line that interconnects a generation facility requires maintenance, the utility requires the ability to ensure that no electrical energy is being supplied to the line that is scheduled for maintenance.

The Hawaiian Electric Companies note that the issue of contractual approaches to addressing curtailment in power purchase agreements has been the subject of extensive discussions as a part of the Public Utilities Commission's Reliability Standards Working Group ("RSWG"). A number of possible approaches towards addressing excess energy curtailment have been identified and are primed for further in depth evaluation and consideration by the Commission and affected stakeholders. Accordingly, the Hawaiian Electric Companies respectfully request that the ongoing work to address this important issue be allowed to continue under the oversight of the Commission.

Thank you for the opportunity to testify.



TESTIMONY BY
KELLY O'BRIEN, VICE-PRESIDENT FOR DEVELOPMENT
FIRST WIND

REGARDING S.B. 612, RELATING TO CURTAILMENT

BEFORE THE
HAWAII STATE LEGISLATURE
HAWAII STATE SENATE
COMMITTEE ON ENERGY AND ENVIRONMENT

TUESDAY, FEBRUARY 5, 2013
CONFERENCE ROOM 225
2:45 PM

Aloha Chairman Gabbard and Distinguished Members of the Committee on Energy and Environment. My name is Kelly O'Brien and I am the Vice-President for Development for First Wind.

First Wind has been developing and operating utility scale wind energy projects in Hawaii since 2006 and to date has invested nearly \$600 million in Hawaii. We own and operate Kaheawa Wind Power I & II on Maui (51 MW) and Kahuku Wind Power (30 MW) and Kawailoa Wind Power (69 MW) on Oahu. First Wind currently employs 25 people in Hawaii with plans to add 5 more in the near term. We are also involved with several utility-scale solar projects in Hawaii. We are firmly committed to helping to improve Hawaii's energy security by decreasing its reliance on fossil fuels for its energy needs. We have a demonstrated record in establishing long-term dialogues and partnerships with the communities we join and we are proud of our accomplishments in establishing successful Habitat Conservation Plans for our projects which ensure a "net benefit" to native wildlife that could be affected by our projects.

First Wind supports the intent of S.B. 612, which is to maximize renewable energy production in Hawaii. Curtailing energy production perpetuates Hawaii's reliance on fossil fuel resulting in negative environmental and economic consequences for Hawaii. First Wind estimates that curtailment at just one of its plants has cost Oahu ratepayers more than \$300,000 per month,. First Wind believes that reducing curtailment is an essential component of Hawaii's clean energy and economic objectives, and accordingly, it is critical that all stakeholders -- including representatives of affected generators and utilities -- continue to explore possible solutions to curtailment as S.B. 612 moves through the legislative process.