

SB 2662

Measure Title: RELATING TO NATURAL RESOURCES BENEATH THE SURFACE OF THE LAND.

Report Title: Public Utilities; Geothermal Energy; Nonfossil Fuel Electricity; Curtailment

Description: Requires 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 4, 2014
3:15 p.m.

MEASURE: S.B. No. 2662

TITLE: Relating to Natural Resources Beneath the Surface of the Land

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. 2662 sets out a formula to determine the amount each independent power producer should be compensated for excess curtailment or interruption.

POSITION:

Although the Commission supports the intent of this measure to maximize the use of electricity generated from renewable energy resources, the Commission has serious concerns with this measure as contractual issues should not be in statute.

COMMENTS:

Issues affecting the economic dispatch of generating units, which include curtailment, are best addressed through existing regulatory procedures and not mandated through statutory requirements. Contract provisions may need to be revised quickly as technologies and operating conditions change. Statutory mandates do not allow for timely and appropriate responses and may cause inadvertent consequences and unnecessary costs, consequences which are all inevitably borne by the ratepayer.

The Commission reiterates, as it has noted in previous testimony, that innovative pricing proposals by independent power producers have become part of the utility energy contract development process, which have included tiered pricing structures where the cost of electricity decreases as the utility accepts more electricity from the independent power producer. The potential cost savings to be realized by accessing the lowest cost electricity from projects under these types of agreements are significant and offer benefits to all parties, including ratepayers.

It is likely that innovative solutions to cost and technical challenges will be hindered when proscribed in statute.

To address curtailment of renewable energy resources, the Commission is using its regulatory authority towards the displacement of higher cost oil-fired generation with generation from lower cost renewable energy. For example, in May of 2013 the Commission's Decision and Order No. 31288 in the rate case proceeding for Maui Electric Company, Ltd. ("MECO") under Docket No. 2011-0092 ("MECO Rate Case"), put the Hawaiian Electric Companies on notice about the Commission's expectation of improved operations, including reduced curtailment. In response to Commission directives coming in the course of the MECO Rate Case, Maui Electric filed in September of 2013 a System Improvement and Curtailment Reduction Plan. Metrics to measure improvement were filed in October of 2013. Monthly curtailment reduction reports have shown significant savings – over \$11 million in 2013 – on the MECO system due to the displacement of oil-fired generation by wind energy.

Similarly, in Docket No. 2012-0212, Decision and Order No. 31758 ("D&O 31758"), issued December 20, 2013, Hawaii Electric Light Company, Inc. has been directed by the Commission to file a Power Supply Improvement Plan within 120 days of D&O 31758's issuance.

Finally, the Commission also notes that the bill title, "Relating to Natural Resources Beneath The Surface of the Land," appears to be more limited than the actual scope of the bill.

Thank you for the opportunity to testify on this measure.



NEIL ABERCROMBIE
GOVERNOR

SHAN S. TSUTSUI
LT. GOVERNOR

STATE OF HAWAII
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TO THE SENATE COMMITTEE ON ENERGY AND ENVIRONMENT

THE TWENTY-SEVENTH LEGISLATURE
REGULAR SESSION OF 2014

THURSDAY, FEBRUARY 4, 2014
3:15 P.M.

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

SENATE BILL NO. 2662 - RELATING TO NATURAL RESOURCES
BENEATH THE SURFACE OF THE LAND

DESCRIPTION:

This measure proposes to require agreements to purchase geothermal and nonfossil fuel generated electricity to contain provisions that provide independent power producers with compensation for excessive curtailment.

POSITION:

The Division of Consumer Advocacy supports the intent of SB No. 2662, but offers comments for this committee.

COMMENTS:

The Consumer Advocate has supported Hawaii's clean energy initiative and recommended adoption of many measures that led to the procurement of various renewable energy sources, both at the utility scale and distributed generation levels.

With the integration of ever increasing levels of renewable energy sources of energy, the chances of curtailment of various sources, especially with intermittent sources, has increased. Curtailment is a situation where even if a generating unit is capable of generating energy, it is not accepted by the utility grid. Curtailment of both intermittent and firm sources of energy has been increasing.

This bill provides one potential means of addressing curtailment. By requiring the electric utility to compensate independent power producers (IPP) of geothermal and non-fossil fuel generators for excess curtailment at amount negotiated in the power purchase agreement (PPA), these IPPs are assured that a specific level of energy will either be taken or paid for by the electric utility. This type of contract is referred to as a "must take" contract.

The problem with "must take" contracts is that these costs are passed directly on to the consumer. The risk of curtailment is therefore shifted from the IPP to the consumer. There are other more equitable solutions to curtailment. For example, tiered pricing of the PPA where the price decreases as the amount of energy accepted by the electric utility increases is one such solution. In this way, both the IPP and consumers benefit from decreased levels of curtailment.

The Consumer Advocate recommends that further efforts should be made to develop possible solutions that would benefit the major stakeholders: the consumers, independent power producer, and the utility company. Since purchased power is a pass-through expense for the utility company, the utility company should be indifferent whether it must make curtailment payments or not. For instance, it should be made clear that any reduction in curtailment is coupled with a plan to reduce the purchased power expenses passed on to ratepayers so that customers will see a decrease in their rates and bills. Any sustained reduction in curtailment will result in less risk for the independent power producer and greater levels of sales of energy to the utility company, which will benefit the independent power producer. Finally, while it might initially reduce some of the customer benefits if the utility company might be given some incentive where reductions in curtailment might result in some reasonable level of reward, it might result in greater efforts in the long run by the utility to actively seek sustained reduction in curtailment while still prudently operating the electric system. As a corollary to that, if the electric utility does not make reasonable efforts to reduce curtailment, then the utility could face financial penalties.

Additionally, the Consumer Advocate recommends that, as part of any solution to address curtailment, IPPs should be required to provide accurate curtailment data to allow regulators to carefully analyze the economic impact of curtailment. With such

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Senate Committee on Energy and Environment
Tuesday, February 4, 2014, 3:15 p.m.
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data, regulators can analyze whether customers are being asked to pay more than reasonable electricity rates and bills as it relates to purchased power.

These issues of curtailment and creating financial incentive and disincentives will be addressed in the Public Utilities Commission decoupling investigation, Docket No. 2013-0141, as part of the Schedule B issues on performance-based ratemaking.

Thank you for this opportunity to testify.



SIERRA CLUB OF HAWAII
MĀLAMA I KA HONUA. *Cherish the Earth.*

MĀLAMA I KA HONUA
Cherish the Earth

SENATE COMMITTEE ON ENERGY & ENVIRONMENT

February 4, 2014, 3:15 P.M.
(*Testimony is 1 page long*)

TESTIMONY IN SUPPORT OF SB 2662

Aloha Chair Gabbard and Members of the Committee:

The Sierra Club, Hawaii Chapter, with over 12,000 dues paying members and supporters statewide, *supports* SB 2662. This measure requires a contractual limitation to the amount of curtailment that can occur to renewable energy.

Renewable energy is now the cheapest form of energy. It is cheaper than Liquefied Natural Gas. Cheaper than oil. Internationally, Denmark gets 25 percent of its electricity from wind. By the end of the decade, it plans on to be at 50 percent. Portugal is already over 50 percent.

Here, nationally, Iowa now gets one-fourth of their electricity from wind. California is likely to get 40 percent of its energy from renewables by 2020. Xcel Energy in Colorado just rejected a major LNG proposal in lieu of cheaper solar energy. These are large states and major countries.

A tipping point is now occurring. The cost of wind energy fell tenfold between 1980 and 2000, and the price of a solar panel has dropped by more than 80 percent in five years. All of this is just as self-reinforcing and self-replicating as climate destabilization. And it will only accelerate.

And yet Hawai'i is not fully benefiting from these cheaper prices. When talking to developers, they point to the uncertainty connected to curtailment. If the product they sell may or may not be purchased, they of course buffer their risk by raising the price. By removing uncertainty, we can ensure more competitive bidding: people will be competing to sell the same amount of product. In addition, we shift some of the risk to the utility to ensure that this renewable energy is actually used.

This measure is a smart rate-setting policy. It will ensure that Hawai'i can continue to benefit from cleaner and now cheaper sources of energy.

Mahalo for the opportunity to testify.



Indigenous Consultants, LLC

Mililani B. Trask, Principal

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Bill#: SB 2662 Re: Natural Resources Beneath the Surface of the Land
Committee: ENE
Hearing Date: Tuesday Feb 4th, 2014
Room: CR 225
Time: 3:15pm

January 30th, 2014

Testimony in Support w/AMENDMENTS

Aloha Legislators,

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.

IC strongly supports this Bill because it will encourage the HECO to ensure that Hawaii's renewable energy resources, including geothermal energy, will be accommodated on the grid. The provisions impose a 'penalty' on the HECO for curtailing indigenous geothermal resources that are much or affordable than fossil fuel by requiring that HECO must pay the energy producer for the value of the energy curtailed.

IC recommends amendments to page 3 Sec 269-27.2 in order to include as a priority the most affordable cost for ratepayers. The language is proposed to section (b) and is underlined:

{Line 18-19 pages 3/6 – Internet copy has no numbers for lines}

“ and to employ and dispatch the non-fossil fuel generated electricity in a manner consistent with the availability thereof to maximize the reduction in consumption of fossil fuels in the generation of electricity to be provided to the public at the most affordable rate.”

This language is recommended in light of the position of the County of Hawaii set out in its

Statement of Position, DOCKET NO. 2013-0141 [In the Matter of Public Utilities Commission Instituting an Investigation to Reexamine the Existing Decoupling Mechanisms for Hawaiian Electric Company, Inc., Hawai'i Electric Light Company, Inc., and Maui Electric Company, Limited].

In their Statement (SOP) the County noted that for Hawaii Island the most critical concern is cost to ratepayers for electricity. Hawaii County consumers pay the highest rates in the USA because HECO & PGV agreed years ago to charge Hawaii County consumers the price of oil for geothermal energy coming from resources owned by the public & Native Hawaiians. This sentiment was also expressed by the PUC when it reviewed the request by HECO & PGV for an increase in production a few years ago. At that time the PUC "REQUESTED" that HECO renegotiate the price because it "was not in the public interest". The PUC "REQUEST" was ignored by HECO and Hawaii County ratepayers continue to pay 40+ cents per kwhr instead of the 8 cents it actually costs PGV to produce this energy. On Hawaii Island, we have had family homes burned to the ground because HECO had shut off their electricity for late payment & the families were living on

Unless the State Legislature includes language that prioritizes the most affordable rate to consumers & the public, it is unlikely that HECO will have any incentive to lower costs to consumers or integrate non-biofuels onto the grid.

Sincerely,

Mililani B. Trask
Indigenous Consultants LLC

HU'ENA



POWER

Bill#: SB 2662 Re: Natural Resources Beneath the Surface of the Land
Committee: ENE
Hearing Date: Tuesday Feb 4th, 2014
Room: CR 225
Time: 3:15pm

January 30th, 2014

Recommending Amendments:

Hu'ena Power is a Hawaii based geothermal development company majority owned by Native Hawaiians. The company was created to bring affordable electricity to the ratepayers of Hawaii Island via renewable, clean geothermal energy production utilizing an abundant, indigenous fuel source. Hu'ena Power has worked with industry experts from all over the world to assess both the transmission and generation of electricity here in Hawaii.

Hu'ena recommends that additional language be added to this measure to ensure that the Public Utilities Commission and HECO are required to address & consider the cost factor for consumers.

For many years the PUC has been aware that Hawaii's consumers pay the highest costs in the USA for Energy. Despite this fact, the PUC has never made lowering costs to ratepayers a primary concern or significant criteria when considering HECO's recommendations for integrating indigenous renewable energy resources onto the grid.

Hawaii Island is an example of an island with vast indigenous renewable energy sources including geothermal, wind & solar resources. All data indicates that energy from these renewables is significantly cheaper than energy coming from Fossil Fuels and BIOFUELS, but HECO continues to ignore these resources in favor of maintaining their old oil powered plants. Biofuels (Aina Ka Pono & Hu Honua) have been the priority for HECO because use of biofuels allows HECO to keep other more affordable sources of energy off the grid.

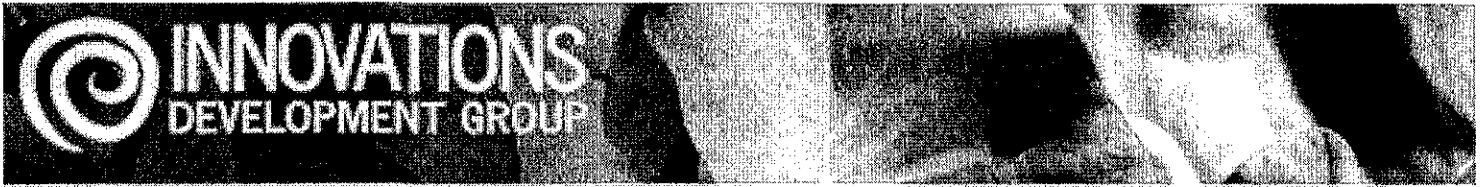
Hu'ena supports the amendments proposed by Indigenous Consultants, specifically, that the underlined language below, be included in the bill. Specifically,

" and to employ and dispatch the non-fossil fuel generated electricity in a manner consistent with the availability thereof to maximize the reduction in consumption of fossil fuels in the generation of electricity to be provided to the public at the most affordable rate.

This amendment strengthens the measure by including those who have been ignored by HECO, our State consumers.

Mahalo,

Roberta Cabral
Hu'ena Power



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Committee: ENE
Hearing Date: Tuesday Feb 4th, 2014
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Recommending Amendments:

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.

IDG supports this measure because it gives HECO a big incentive to integrate our States renewable energy resources, including geothermal energy, onto the grid. That incentive is that HECO must pay independent power producers compensation for 'excessive curtailment' of energy they produce from Hawaii's geothermal & other renewable energy resources.

IDG supports amendments proposed by Indigenous Consultants because these changes would make the PUC and HECO consider as a priority costs to ratepayers & consumers.

Mahalo,

Pat Brandt, CEO
Innovations Development Group

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

S.B. 2662 -- Relating to Natural Resources Beneath the Surface of the Land

**Tuesday, February 4, 2014
3:15 pm, Conference Room 225**

**By Rodney Chong
Manager, Renewable Acquisition
Hawaiian Electric Company, Inc.**

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

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

Hawaiian Electric does not support S.B. 2662 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. The Companies support the objective to minimize curtailment of cost-effective renewable energy that can lower bills for all customers; however, there are competing pressures as more renewable generating resources are added to the system, given our isolated island grids. 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.

There are pricing mechanisms to compensate developers who produce energy in a way that best supports the electric grid. For example, power purchase agreements may include capacity payments that pay a higher price for energy delivered during periods of peak load. Negotiating these provisions for each project allows the utility to make the best use of the project's generating profile.

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.

Any discussion of curtailment practices should encompass all technologies as a well balanced generation portfolio leverages the characteristics of multiple technologies. Placing limitations on how geothermal projects can be curtailed may result in adverse effects to other renewable generating systems such as wind and solar. Restricting curtailment for a particular generating technology may hamper economic dispatch in the future where there may be more economical renewable resources available.

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 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.