NEIL ABERCROMBIE
GOVERNOR

SHAN TSUTSUI
LT. GOVERNOR

FREDERICK D. PABLO
DIRECTOR OF TAXATION

JOSHUA WISCH
DEPUTY DIRECTOR

STATE OF HAWAII
DEPARTMENT OF TAXATION
P.O. BOX 259
HONOLULU, HAWAII 96809
PHONE NO: (808) 587-1530
FAX NO: (808) 587-1584

To: The Honorable David Y. Ige, Chair
and Members of the Senate Committee on Ways and Means

Date: Wednesday, February 19, 2014
Time: 9:25 A.M.
Place: Conference Room 211, State Capitol

From: Frederick D. Pablo, Director
Department of Taxation

Re: S.B. No. 2196, S.D.1, Relating to Energy

The Department of Taxation (Department) appreciates the intent of S.B. 2196, S.D.1, and provides the following comments for your consideration.

S.B. 2196, S.D.1, re-establishes the energy systems development special fund, and would increase the amount of the Environmental Response, Energy, and Food Security Tax to be deposited into the environmental response revolving fund, energy security revolving fund, and agricultural development revolving fund. It would also extend the repeal of the rate and certain allocations of the Environmental Response, Energy, and Food Security Tax from June 30, 2015, to June 30, 2030.

As written, none of the proposed changes in S.B. 2196, S.D.1, will affect the Department's ability to administer the Environmental Response, Energy, and Food Security Tax. If any adjustments to the rate of the tax are made, the Department requests that those changes be made effective after December 31, 2014, to allow the Department adequate time to modify its forms and instructions.

Thank you for the opportunity to provide comments.

WRITTEN ONLY

TESTIMONY BY KALBERT K. YOUNG
DIRECTOR, DEPARTMENT OF BUDGET AND FINANCE
STATE OF HAWAII
TO THE SENATE COMMITTEE ON WAYS AND MEANS
ON
SENATE BILL NO. 2196, S.D. 1

February 19, 2014

RELATING TO ENERGY

Senate Bill No. 2196, S.D. 1, increases the amount of the Environmental Response, Energy, and Food Security Tax (i.e., Barrel Tax) deposited into the Environmental Response Revolving Fund from 5 cents to 15 cents; increases the amount of the Barrel Tax deposited into the Energy Security Special Fund from 15 cents to 25 cents; increases the amount of the Barrel Tax deposited into the Agricultural Development and Food Security Special Fund from 15 cents to 25 cents; re-establishes the Energy Systems Development Special Fund and deposits into the fund 10 cents of the Barrel Tax; and extends the repeal of various allocations of the Barrel Tax from June 30, 2015 to June 30, 2030.

The Department of Budget and Finance would like to point out that the Barrel Tax is currently set at $1.05 per barrel of petroleum product and brings in about $27.3 million annually in revenues. Of the total Barrel Tax receipts, the general fund's current allocation is 70 cents (of the $1.05) which generates about $18.2 million annually. This bill would reduce the general fund's allocation from 70 cents to 30 cents and will result in a general fund loss of $10.4 million annually assuming that the current rate is extended. This revenue loss is not accounted for in the State's general fund financial plan.

We encourage the Legislature to support Administration bills, Senate Bill No. 2805 and House Bill No. 2256, which extends the repeal date of the Barrel Tax and maintains the $1.05 per barrel charge through June 30, 2030. The Administration bills also extend the current distribution of the Barrel Tax, including 70 cents for the general fund which will continue to generate $18.2 million annually in revenues. This amount is accounted for in the State's general fund financial plan.

NEIL ABERCROMBIE
GOVERNOR

RICHARD C. LIM
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
RICHARD C. LIM
Director
Department of Business, Economic Development, and Tourism
Before the
Statement of
RICHARD C. LIM
Director
Department of Business, Economic Development, and Tourism
Before the
SENATE COMMITTEE ON WAYS AND MEANS

Wednesday, February 19, 2014
9:25 a.m.
State Capitol, Conference Room 211
in consideration of

SB 2196, SD1
RELATING TO ENERGY.

Chair Ige, Vice Chair Kidani, and Members of the Committee.

The Department of Business, Economic Development, and Tourism (DBEDT) supports SB 2196, SD1 which amends various aspects of the Environmental Response, Energy, and Food Security Tax ("barrel tax") statute, including a proposed reallocation of barrel tax revenues, and amends Act 73, Session Laws of Hawaii 2010, to extend the repeal date from June 30, 2015 to June 30, 2030.

The Administration strongly supports Section 4 which extends the sunset date of the barrel tax to firmly align resources with the State's established 2030 clean energy mandates. It is critical to ensure this pathway of dedicated funding is continued to commit resources to both short- and long-term initiatives required to achieve Hawaii's statutory clean energy goals.

The Hawaii Clean Energy Initiative (HCEI) was passed by the Legislature in Act 155, Session Laws of Hawaii 2009 and codified through Hawaii Revised Statutes Sections 269-92 and 269-96. These laws established our state's Renewable Portfolio Standard (RPS) and Energy Efficiency Portfolio Standard (EEPS) in a manner to achieve an aggressive 70% clean energy goal by 2030. This measure extends the State's commitment to Hawaii's policy objectives set in Chapter 269 and as passed by the Legislature in Act 73, Session Laws of Hawaii 2010, to improve energy and food self-sufficiency through the establishment of the barrel tax.

Significant investments in analysis, planning and infrastructure are required to transform Hawaii's economy and reduce its historical dependence on imported fossil fuel towards achieving HCEI's 2030 mandates. By Statute, the DBEDT Director is the State's Energy Resources Coordinator (ERC), and in order to fulfill these statutory duties, the State Energy Office is responsible for planning and carrying out the State's energy agenda and for identifying the high impact solutions that make the biggest difference in fulfilling the State's energy objectives. Such high impact solutions have included technical analysis on renewable and grid technologies, developing innovations in clean energy financing, self-service tools to enable investor and developer activity, and facilitating energy savings performance contracts. Dedicated energy funds from the barrel tax (Energy Security Special Fund) have provided critical seed funding for HCEI and are now the primary source for the State Energy office to implement HCEI.

The State is now positioned well to meet and exceed its 15% interim RPS for 2015 based on the last 5 years of clean energy development. Through these investments and activities, clean energy has also provided significant positive contributions to economic development and jobs—in 2012, over 28% of all construction expenditures were solar-related.

However, achieving our 2020 and 2030 clean energy goals will require continued and more intensive effort, innovation, and resources. The impending sunset of the barrel tax at the end of FY 2015 leaves uncertainty in funding for many of our State's clean energy and food security initiatives and may put the achievement of our State's long-term goals of energy and food self-sufficiency at risk.

This resource strategy is aligned with the State's 2030 clean energy goals to ensure continued progress and plan development for clean energy infrastructure in Hawaii and support for the Departments of Agriculture and Health to respectively undertake food self-sufficiency and equip for an environmental response. This measure enables the State's long-term commitment and continuation of HCEI programmatic activity that has a proven record of success in building economic growth and green jobs, and continues legislative oversight for, and responsible use of and deployment of funds.

DBEDT respectfully defers to the Department of Agriculture, Department of Health, and the Hawaii Natural Energy Institute on their respective areas of this measure.

Thank you for the opportunity to provide testimony on SB 2196, SD1.

NEIL ABERCROMBIE
GOVERNOR OF HAWAII

DIRECTOR OF HEALTH

STATE OF HAWAII
DEPARTMENT OF HEALTH
P.O. Box 3378
HONOLULU, HAWAII 96801-3378

In reply, please refer to:
File:

SENATE COMMITTEE ON WAYS AND MEANS

S.B. 2196 SD1, RELATING TO ENERGY

Testimony of Gary Gill
Deputy Director, Environmental Health Administration

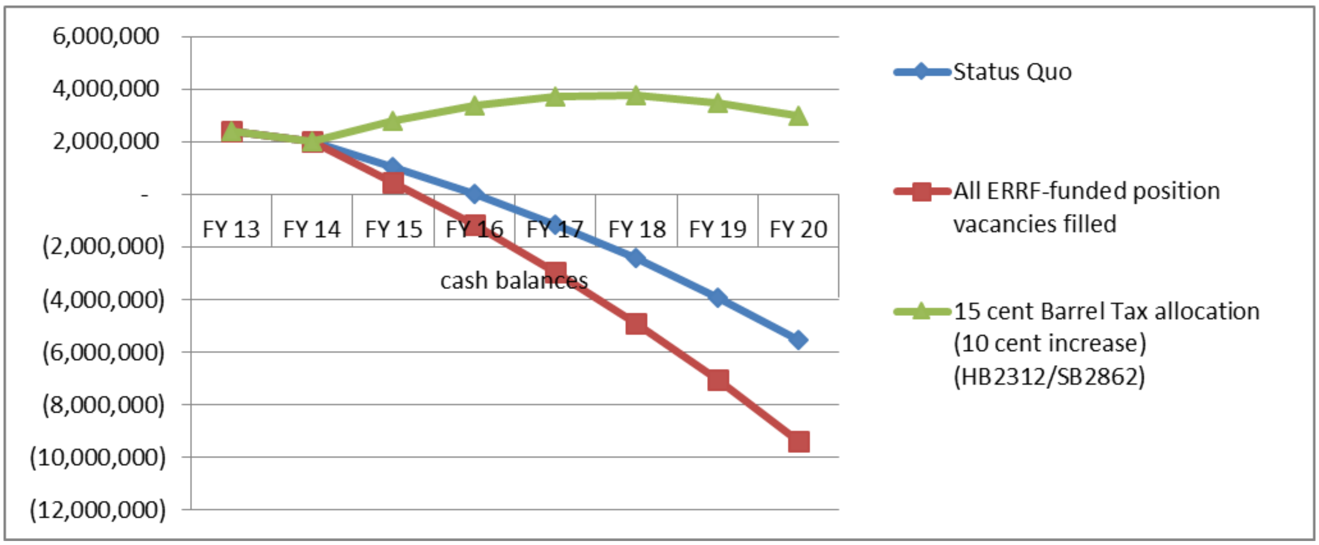
February 19, 2014
9:25 a.m.

Department's Position: COMMENTS.

Fiscal Implications: This measure's increase in the total per barrel allocation from the Barrel Tax into the ERRF (from 5 to 15 cents per barrel) will secure the Department's ability to quickly, comprehensively, and effectively respond to hazardous material releases and environmental threats to ensure public safety. Decreases in Environmental Response, Energy, and Food Security Tax (Barrel Tax) revenue over the past several years have eroded the Environmental Response Revolving Fund (ERRF) balance to critical levels. In addition, the measure's extension of the repeal date of Act 73 sections 2, 3, 4, and 7 from June 30, 2015 to June 30, 2030 will ensure the ongoing availability of Barrel Tax funds for emergency response, clean energy, and food security into the future.

Purpose and Justification: This measure will increase the total per barrel allocation from the Barrel Tax into the ERRF from 5 to 15 cents per barrel, which will allow the Department to continue to quickly and effectively respond to hazardous material releases and environmental threats to protect public safety and the environment. The ERRF assures the State's ability to respond to and protect Hawaii from the devastating impact of oil, chemical, and other potentially dangerous spills, such as molasses, on public health and safety, the environment, and the economy. The ERRF also funds preemptive measures, including the testing of potential or likely contaminated sites, remediation of contaminated sites, testing of state waters, and the regulation and management of solid and hazardous wastes.

In the past six years, ERRF revenue has decreased by $500,000. It cannot be sustained by its current 5 cents per barrel allocation (see graph below).



Oil tax revenues have been declining in recent years due to rising energy costs and growth in alternative energy resources, as well as a sluggish economy. Combined with the unpredictability of levying environmental enforcement fines and demands on emergency response due to events such as the Tohoku earthquake and tsunami, Honolulu Harbor molasses spill, and several ground contaminations, the ERRF is projected to reach a cash balance deficit of over $1 million by Fiscal Year 2017.

The projected deficit would severely impact matching funds for the present Hazardous Waste Management, Leaking Underground Storage Tank, Water Pollution Control-Surface Water, Public Water System Supervision, and Hazardous Materials Emergency Preparedness grants. The lack of $823,168 in matching ERRF funds would jeopardize a total of $4,116,906 in federal dollars, because many of the Department's federal grants require non-federal support or commitment to grant purposes in the form of dollars and/or personnel time, and without state matching funds, federal funds will not be awarded. This growing ERRF deficit would eliminate funding for 42 vital positions throughout Environmental Health Administration programs.

In addition to this measure's much-needed increase in the ERRF allocation from the Barrel Tax, its extension of the repeal date from June 30, 2015 to June 30, 2030 will ensure the ongoing availability of these Barrel Tax funds for the ERRF, Energy Systems Development Special Fund, Energy Security Special Fund, and the Agricultural Development and Food Security Special Fund well into the future.

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

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

FEBRUARY 19, 2014
9:25 a.m.

MEASURE: S.B. No. 2196, S.D. 1
TITLE: Relating to Energy

Chair Ige and Members of the Committee:

DESCRIPTION:

This measure proposes to re-establish the Energy Systems Development Special Fund in order to provide funding for the Hawaii Natural Energy Institute of the University of Hawaii ("HNEI") and its work on Hawaii energy programs. The bill would also extend the sunset of the State's Environmental Response, Energy, and Food Security Tax ("Barrel Tax") to June 30, 2030, as well as increase allocations to certain special funds supported by the Barrel Tax.

POSITION:

The Public Utilities Commission ("Commission") supports the intent of this measure and would like to offer the following comments for the Committee's consideration.

COMMENTS:

The Commission supports, in particular, this bill's provisions that re-establish the funding source for HNEI via the Energy Systems Development Special Fund. Funding for the work of HNEI is important for the successful transformation of Hawaii's energy systems, while providing reliable, cost-effective electrical service for all islands.

Hawaii's electricity system is highly complex and technical. Hawaii's isolated island grids have a high degree of sensitivity and are required to operate in a completely self-sufficient manner. Meanwhile, renewable resources, energy efficiency systems, grid management and demand response systems, electric vehicles, and energy storage are being added to the system at a rapid pace. HNEI's research helps the grid to continue to operate reliably and affordably while it undergoes its transformation. The testing, modeling, technology validation, and economic analysis conducted by HNEI is critically important to the Commission, which must make informed and knowledgeable decisions to advance the public good.

HNEI has played, and will continue to play, an important role in understanding, modeling, and coordinating the input of local, national, and international experts and agencies that are willing to partially fund cutting-edge work related to Hawaii's energy transformation. These entities support research in Hawaii because the renewable energy solutions and grid management techniques developed in the State will likely have global applicability. HNEI's ability to coordinate and synthesize this research, expertise, and knowledge is used to further benefit Hawaii's electricity system.

I encourage your support of this important work.

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

NEIL ABERCROMBIE
Governor

SCOTT E. ENRIGHT
Chairperson, Board of Agriculture

State of Hawaii
DEPARTMENT OF AGRICULTURE
1428 South King Street
Honolulu, Hawaii 96814-2512
Phone: (808) 973-9600 FAX: (808) 973-9613

TESTIMONY OF SCOTT E. ENRIGHT
CHAIRPERSON, BOARD OF AGRICULTURE

BEFORE THE SENATE COMMITTEE ON WAYS AND MEANS
WEDNESDAY, FEBRUARY 19, 2014
9:25 A.M.
Conference Room 211

SENATE BILL NO. 2196 SD1
RELATING TO ENERGY

Chairperson Ige and Members of the Committee,

Thank you for the opportunity to testify on Senate Bill 2196 SD1. This bill would reestablish the Energy Systems Development Special Fund and increase the amount of the Environmental Response, Energy, and Food Security Tax to be deposited into the Environmental Response Revolving Fund, Energy Security Special Fund, and the Agricultural Development and Food Security Special Fund. The Hawaii Department of Agriculture supports this bill but emphasizes that the primary concern for the Department is the extension of the sunset date as outlined in the administration's bill, Senate Bill 2805.

There is a growing public sentiment that realizes, as an island state, Hawaii is precariously dependent on imported food and energy. The legislature responded to this movement by passing Act 73, Session Laws of Hawaii 2010. As part of that act, the Agricultural Development and Food Security Special Fund was created with the mandate to fund activities intended to increase agricultural production or processing that may lead to reduced importation of food, fodder, or feed from outside the State. The Department has moved forward with this mandate and has funded positions and programs to preserve agricultural lands, repair irrigation systems, lower the costs of farming, and raise both the supply and demand of local food.

The Department would like to continue moving forward with its effort towards food security and views the Environmental Response, Energy, and Food Security Tax as a vital revenue source to provide the resources to realize the goal of greater food security and self-reliance. The Department is supportive of an increase in funding for the Environmental Response Revolving Fund, Energy Security Special Fund, and the Agricultural Development and Food Security Special Fund and would defer to the respective Departments on each of those funds.

We thank you for the opportunity to provide our testimony on this measure.

Written Comments Presented Before the
Senate Committee on Ways and Means
Wednesday, February 19, 2014
by
Richard Rocheleau, Director
Hawaiʻi Natural Energy Institute
School of Ocean and Earth Science and Technology
University of Hawaiʻi at Mānoa

SB 2196 SD1 – RELATING TO ENERGY

Chair Ige, Vice-Chair Kidani, and members of the committee:

My name is Richard Rocheleau, Director of the Hawaiʻi Natural Energy Institute at the University of Hawaiʻi at Mānoa. I support sections 2 and 4 of SB 2196 SD1, which would re-establish the Energy Systems Development Special Fund (ESDSF) and extend the repeal of barrel tax allocations until 2030. I defer to DBEDT, DOA and DOH on the proposed reallocation of barrel tax collections.

The ESDSF, which was administered by HNEI, sunset last June, therefore the current 10 cent allocation of the tax on each barrel of petroleum product imported into Hawaii that went to the ESDSF, now goes to the general fund. While most of HNEI's resources come from other sources, primarily federal funding, re-establishing the ESDSF would allow HNEI to continue to support Hawaii specific projects that could not be directly funded by federal dollars. These include testing of emerging technologies for future deployment in Hawaii such as advance battery energy storage and smart grid technology; modeling to understand technical impacts to grid operations as we move toward our HCEI goals, and independent economic analyses to help decision makers make the most informed decision possible.
.
Approximately $7 million was deposited into the ESDSF between 2010 and 2013, before it sunset. These funds played a crucial role in leveraging federal investment, removing roadblocks in programs critical for the success of HCEI, and contributing to programs that are likely to spur economic development. The ESDSF funds were, and are being used on projects with significant potential to reduce the use of fossil fuels in Hawaii (see attached ESDSF Factsheet). For example:

- GE RPS Study– this ongoing work builds on previous studies to evaluate and assess the technical barriers and costs associated with implementing changes to the electric grid infrastructure that will move us toward compliance with State RPS requirements. While the initial work has addressed the technical impacts and cost of various renewable energy penetration scenarios, including comparing the value of grid-tied and generation-tied undersea island interconnections with island independent systems; the ongoing work will also consider the impact and cost of alternative fuels (e.g. LNG), advanced grid management technologies (e.g. battery energy storage and demand response), and sensitivities to issues such as technology cost and changes in demand . The goal of this study is to conduct the work with fully transparent assumptions to inform decision makers as they implement plans to achieve State energy objectives.

- Wave Energy Test Site– although wave energy technology is still precommercial, wave resource studies indicate the potential for significant impact for Hawaii. HNEI, via the ESDSF, provided cost-share funding resulting in $4.3 MM additional funding from USDOE for environmental monitoring and independent data analysis to support a grid-connected plug-and-play wave energy generation test facility at Marine Corps Base Hawaii. As a result of this effort, HNEI is now finalizing negotiations for an additional $8 million of funding from Navy which will continue these efforts for an additional 2-3 years while also providing direct support to wave energy technology developers to attract them to Hawaii. In addition to this federal investment which might not otherwise have occurred, this work will provide Hawaii entities with first-hand experience with emerging wave energy technologies.

- Smart Inverters – As the penetration level of photovoltaics increases, advanced technologies to address the impacts of intermittency are critically needed. Under this program, $400K of ESDSF funding was used to leverage $6 million of USDOE funding to develop, demonstrate, and commercialize smart-grid enabled inverters. These advanced inverters will be deployed this quarter on select volunteer homes to validate their ability to help mitigate grid reliability impacts resulting from high penetrations of PV systems. The results of this work will be made available to the utility, to decision makers, and to the technology companies.

- Hawaii Clean Energy Programmatic Environmental Impact Statement– The PEIS process is intended to inform federal and local agencies, as well as local communities and developers, about technologies, environmental resource areas, potential impacts, government requirements, best practices, and mitigation measures required to make informed decisions about actions that support achieving HCEI goals, including potential undersea cable island interconnection. Providing a common base of knowledge and understanding for future project-specific environmental reviews to agencies, community members, and developers is intended to facilitate discussion and decision making.

Re-establishing the ESDSF and extending the barrel tax allocation sunset to 2030 will provide a consistent funding source and a clear signal to federal funding agencies that Hawaii is committed to advancing its energy policy initiatives and developing efficient and economic technologies that will help ensure Hawaiʻi continues to move forward to meet its clean energy goals.

HNEI
Hawai'i Natural Energy Institute
School of Ocean and Earth Science and Technology
University of Hawai'i at Mānoa

ENERGY SYSTEMS DEVELOPMENT SPECIAL FUND

- Established in 2007 under ACT 273. sunset on June 30, 2013
- Purpose: To develop "an integrated approach and portfolio management of renewable energy and energy efficient technology projects that will reduce Hawaii's dependence on fossil fuel and imported oil and other imported energy resources and move Hawaii toward energy self-sufficiency." (HRS §304A-2169(a))
- Unfunded until 2010, when ACT 73 provided 10 cents of the tax on each barrel of petroleum product ("Barrel Tax") be deposited into the fund
- $7 million – approximate funds received before sunset
- HNEI coordinated closely with DBEDT to develop expenditure plans to maximize value of the funds to meet near term needs and opportunities within the state that cannot be met by federal funding alone
- Current portfolio includes renewable power generation, advanced transportation, energy efficient end-use technologies, and the integration of systems to allow increased renewable use

KEY ACTIVITIES/RESULTS

- Supported Hawaii specific projects important for achieving RPS goals
- Leveraged over $12M in federal funds that would not otherwise have been spent on Hawaii research projects

- GE RPS Study ($850K) :
  - Identifies and evaluates scenarios and reserve requirements for achieving 35% to 50% renewables on Oahu and Maui County
  - Compares cost of electricity for various grid-tie, gen-tie, and independent island system secnarios.
  - Ongoing work will assess the impacts of LNG for power production, modified utility operating practices, and advanced ancillary services such as demand response and battery energy storage

- Smart Inverters ($400K) – leveraged $ 6MM USDOE funding to develop, demonstrate and commercialize smart grid-enabled PV inverters to mitigate grid reliability impacts of high penetrations of PV systems

- Wave Energy Test Site ($500K) – Provided required cost-share for wave energy test resulting in $ 4.3 MM additional funding from USDOE and leveraging over $20 MM of current and future investment by USDOD to develop and operate grid-connected plug-and-play facility an MCBH

- Hawaii Clean Energy PEIS ($1.7M)
    - Develops knowledge base for developers, government agencies, and communities about technologies, environmental resource areas, potential impacts, government requirements, best practices, and mitigation measures
    - Provides guidance to streamline project specific NEPA review, permitting processes, and community interaction
    - Draft PEIS due out in March 2014, with public hearings to follow

- Geothermal
    - Resource assessment ($400K) – leveraged over $ 1MM from USDOE to validate a new procedure to map the subsurface structure of the geothermal resource and lower exploration costs
    - Strategic Development study ($115K) – identified needs to prepare state and county agencies for the complex planning, assessment, regulatory, and permitting activities required for geothermal development

- Hydrogen
    - Grid Management ($500K) – leveraged over $1.7MM USDOE and $ 1MM ONR to demonstrate cost effective use of electrolyzer to simultaneously produce hydrogen for fuel and provide for ancillary services to grid
    - Fueling ($550K) - supported the development of critical hydrogen delivery infrastructure to deliver hydrogen produced at the PGV geothermal plant to Hawaii Volcanoes National Park to support fuel cell electric shuttle buses

- Hawaii Energy Policy Forum support/HCEI metrics ($350K) – general forum support and development of metrics to measure the State's progress toward meeting the Hawaii Clean Energy Initiative's requirements

- Pacific Asian Center for Entrepreneurship and E-Business (PACE) ($50K) – funded several UH College of Business fellowships to conduct technical and business analyses of critical energy issues

- Sea Water Air Conditioning ($160K) – monitoring of SWAC projects to validate high-fidelity plume models that assess the impacts of cold water return depth. Depth of discharge has major impact on the overall cost of the SWAC project.

- Energy Efficiency ($356K) – research and demonstration projects on lower cost natural ventilation and cooling systems including radiant cooling and ceiling fan control systems supporting HCEI energy efficiency goals

- Hawaii State Energy Office support ($1M) – support programs for energy efficiency, renewable energy, and test bed development, education and outreach

REACH
RENEWABLE ENERGY ACTION COALITION OF HAWAII
1110 University Avenue, Suite 402
Honolulu, Hawaii 96826
Tel: (808) 371-1475
www.REACHawaii.org

Testimony of ERIK KVAM
President of Renewable Energy Action Coalition of Hawaii
e-mail: Kvam@REACHawaii.org

In SUPPORT of SB 2196 SD 1 RELATING TO ENERGY

Before the
SENATE COMMITTEE ON WAYS AND MEANS

February 19, 2014 9:25 a.m.

Aloha Chair Ige, Vice-Chair Kidani and members of the Committee.

My name is Erik Kvam. I am the President of Renewable Energy Action Coalition of Hawaii (REACH), a trade association whose vision is a Hawaiian energy economy based 100% on renewable sources indigenous to Hawaii.

REACH is in **SUPPORT** of SB 2196 SD 1.

Right now, most of Hawaii's energy is imported through an oil supply line that stretches 11,000 miles to the Persian Gulf. As imported fuels like oil get scarcer and more expensive, sooner or later these imported fuels will stop flowing to Hawaii. When imported fuels stop flowing to Hawaii, we necessarily will be at 100% renewable energy.

To plan for Hawaii's 100% renewable energy future, Hawaii's utilities will need the support of the technical support of the energy planning related agencies of the State government – primarily the Hawaii Natural Energy Institute (HNEI) and the Hawaii State Energy Office (HSEO).

Since 2010, many of the activities of HNEI and HSEO have been funded by the Energy Systems Development Special Fund (the "Fund"), which receives revenues from a 10 cents tax on each barrel of petroleum product ("Barrel Tax"). The Fund apparently was repealed on June 30, 2013.

REACH **SUPPORTS** SB 2196 SD 1 – re-establishing the Fund, increasing the barrel tax to 15 cents per barrel of petroleum product, and extending the sunset date of various allocations of the Fund to 2030 -- to fund the technical planning support activities of HNEI and HSEO needed to achieve 100% renewable energy for Hawaii.

Thank you for providing this opportunity to testify.



SENATE COMMITTEE ON WAYS AND MEANS
February 19, 2014, 9:25 A.M.
Room 211
(Testimony is 4 pages long)

TESTIMONY IN STRONG SUPPORT OF SB 2196 SD1

Chair Ige, Vice Chair Kidani, and members of the Ways and Means Committee:

The Blue Planet Foundation strongly supports SB 2196 SD1, reallocating the funds collected through the Environmental Response, Energy, and Food Security Tax to carry out the intended sustainability purposes of the policy. This measure also repeals the sunset date for certain parts of the tax allocation. We believe that this measure properly amends Hawaii's "fossil fuel fee" to reflect the original intent of the policy. Blue Planet has found that the policy of taxing our fossil fuel imports to fund clean energy solutions has broad support among Hawaii residents.

Blue Planet supports eliminating the sunset dates on the barrel tax entirely for all sections, as well as further amendments to this policy to expand Hawaii's fossil fuel fee to include other fossil fuel imports such as industrial methane (LNG) and coal.

Rationale for reallocation of the fossil fuel fee

Hawaii's barrel tax law is keystone clean energy policy that provides a dedicated investment in clean energy, funding the critical planning, development, and implementation of clean energy programs that will foster energy security for Hawaii. Blue Planet believes the best way to provide investment funds is by tapping the source of our problem—imported fossil fuel. We have also found, through three separate surveys commissioned by Blue Planet, that Hawaii residents strongly support this taxing policy. Senate Bill 2196 SD1 extends this smart policy through 2030 (although Blue Planet supports eliminating the sunset date on Hawai'i's barrel tax entirely).

If we truly want to rapidly transition Hawaii to a clean, sustainable energy future, we have to be prepared to invest in that preferred future today. The reallocation of the fossil energy tax would provide needed funding for clean energy and efficiency research, planning, implementation to transition to our preferred clean energy future. As we dramatically expand our clean energy capacity in Hawaii, the real economic benefits of this carbon surcharge will far outweigh the

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

additional burden it may present. The majority of these revenues should be directed to clean energy planning, development, integration, incentives, and other activities facilitating Hawaii's energy transformation.

Carbon Tax is Smart Tax Policy

A fossil fuel fee (or "carbon tax") is smart tax-shifting policy that discourages fossil fuel use while providing a source of revenue for clean energy planning and implementation. The concept behind the measure is to help "internalize" the external costs of certain activities; in this case, charge a fee for products that are damaging to the environment and use that money to help mitigate the damage. The link is quite clear between the use of petroleum products and corresponding impacts on our fragile island environments—not only in oil spills, which was the original impetus for the environmental response tax, but also in runoff from the roads our cars drive on, in degraded air quality, and in greenhouse gas emissions and climate change.

Unlike many other taxes, the barrel tax is largely avoidable by most residents. Energy efficiency, conservation, and switching to clean sources of power all reduce the burden of the tax. In fact, most residents could reduce the amount of barrel tax they pay by installing some compact fluorescent light bulbs at home and ensuring that car tires are properly inflated.

Expanding "carbon tax" to all fossil fuels fair and sensible

Blue Planet believes that Hawai'i's "carbon tax" should be amended to include other fossil fuels to ensure that if Hawai'i chooses to import industrial liquefied methane (i.e. natural gas, or "LNG") barrel tax revenues will not be detrimentally impacted, as well as have coal pay its fair share. This is sensible and responsible. The petroleum products currently covered by the barrel tax are fossil fuels, just like LNG and coal. The environmental response, energy, and food security issues addressed by the barrel tax are no less threatened by LNG and coal imports than by any other fossil fuel

The preferred approach to do this in legislation is basing the fossil tax on energy content (as was proposed in HB 451 HD1 of 2013). By taxing all fossil fuels based on their *energy content* (using an approximation of 5.8 Mbtu per barrel of petroleum as the benchmark), the various fuels are rewarded for efficient end-use. For example, if a fuel's energy content is more efficiently converted to power, the total barrel tax revenues from that fuel source will be lower (because less of the fuel will be imported to produce a given amount of power). Similarly, if a fuel's energy content is not converted efficiently, then the barrel tax revenues for that fuel will be higher (because more fuel must be imported to make a given amount of power). This approach based on energy content, is fair, sensible, and rationally related to the environmental and energy purposes of the barrel tax. We further support the amending Hawai‘i’s carbon tax to set the energy content for each ton of coal, for tax purposes, to 25 million British Thermal Units.

All fossil fuels have significant negative impacts

The myth that LNG is a “clean energy” resource has been scientifically debunked. “Natural” gas is comprised primarily of methane (CH_4). Methane is a potent greenhouse gas – more potent than CO_2. According to the U.S. EPA, “methane emissions released to the atmosphere (without burning) are about 21 times more powerful than CO_2 in terms of their warming effect on the atmosphere.”[1] This is critical, because LNG production is known to release large quantities of methane into the atmosphere, long before the LNG reaches a power plant to be burned. For example, on January 3, 2013, the highly respected scientific journal *Nature* reported on findings presented by NOAA scientists who measured methane leakage rates from LNG wells. The title of that report is “Methane leaks erode green credentials of natural gas.”[2] Among other things, the report notes that the NOAA scientists measured methane leakage from LNG wells in Utah equating to 9% of well production. This is approximately three times higher than “the 3.2% threshold beyond which gas becomes worse for the climate than coal.”[3] Studies of other well fields and natural gas systems have similarly reported methane leakage exceeding the 3.2% threshold.[4]

Similarly, coal is the dirtiest fossil fuel and produces the most carbon dioxide per energy output at the point of combustion (with significant upstream environmental impacts as well).[5] Therefore, it would be unfair, and make little analytical sense, to exempt gaseous and solid fossil fuels from the barrel tax.

Public Support

Blue Planet Foundation conducted market research in December 2009, March 2010, and December 2010 to discern the level of public support for a barrel tax for clean energy

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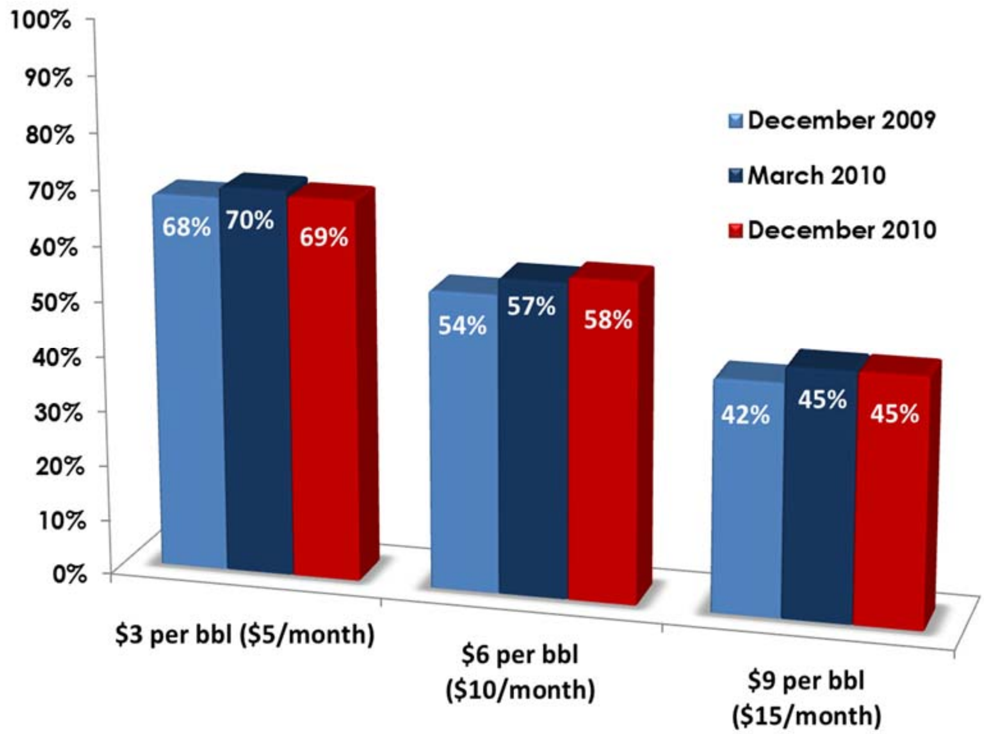
[1] *See* http://www.epa.gov/cleanenergy/energy-resources/refs.html
[2] *See* Tollefson, Methane Leaks Erode Green Credentials of Natural Gas, NATURE (January 3, 2013) (reporting “alarmingly high” leaks of 9% of well production).
[3] *See* Alvarez et al., Greater focus needed on methane leakage from natural gas infrastructure, PROC. NAT’L ACAD. SCI. (April 24, 2012).
[4] *See*, e.g., Pétron et al., Hydrocarbon emissions characterization in the Colorado Front Range: A pilot study, J. GEOPHYS. RES. 117; (2012); Howarth et al., Methane Emissions from Natural Gas Systems, Background Paper Prepared for the National Climate Assessment, Ref. no. 2011-0003, available at http://www.eeb.cornell.edu/howarth/Howarth%20et%20al.%20--%20National%20Climate%20Assessment.pdf
[5] Energy Information Administration, Emissions of Greenhouse Gases in the United States 1985-1990, DOE/EIA-0573 (Washington, DC, September 1993), p. 16.

investment. The statewide survey of residents found broad support for a barrel tax with roughly 70% supporting a tax of some amount. Each survey had a random sample of 500 residents statewide, providing a margin of error of 4.4% at a 95% confidence level.



The average level of support was equivalent to a $5 per barrel tax. Forty-five percent of residents supported paying an additional $15 on their monthly energy bills, equivalent to a $9 per barrel tax. These findings should provide comfort to decision makers wrestling with how to develop funding for Hawaii's clean energy future—Hawaii's residents are willing to pay to wean Hawai'i from its oil dependence. *Please see chart at end of testimony.*

While it's clear that we need to aggressively increase our energy efficiency and clean energy use in Hawai'i to decrease our reliance on imported crude, we cannot do it without adequate funding for development and implementation. We believe with appropriate amendments to Hawai'i's carbon tax policy, we can wisely tap the source of its problem—imported fossil fuel—to fund a food- and energy-secure future.

We respectfully ask that these committees forward SB 2196 SD1 with amendments to expand the barrel tax to include other fossil fuels as well as eliminate the sunset date for the tax and its allocations entirely.

Mahalo for the opportunity to testify.

The Nature Conservancy of Hawai‘i
923 Nu‘uanu Avenue
Honolulu, HI 96817

Tel (808) 537-4508
Fax (808) 545-2019
nature.org/hawaii

Testimony of The Nature Conservancy of Hawai‘i
Supporting S.B. 2196 SD1 Relating to Energy
Senate Committee Ways and Means
Wednesday, February 19, 2014, 9:25AM, Room 211

The Nature Conservancy of Hawai‘i is a private non-profit conservation organization dedicated to the preservation of the lands and waters upon which life in these islands depends. The Conservancy has helped to protect nearly 200,000 acres of natural lands in Hawai‘i. Today, we actively manage more than 35,000 acres in 11 nature preserves on Maui, Hawai‘i, Moloka‘i, Lāna‘i, and Kaua‘i. We also work closely with government agencies, private parties and communities on cooperative land and marine management projects.

The Nature Conservancy supports S.B. 2196 SD1 and its provisions to redistribute the barrel tax revenue and to extend the sunset dates on the barrel tax to June 30, 2030. We believe this is effective policy for investing in clean energy and local agriculture initiatives that reduce our dependence on imported fossil fuel and imported food, and to enhance the State’s oil spill response capacity.

Climate change caused by burning fossil fuels is an imminent and unprecedented threat to every person in Hawai‘i. It is our responsibility to do what we can and what is necessary reduce our own carbon emissions, however small on a global scale, to contribute to the worldwide effort needed to mitigate the growing effects of climate change.

Even if we drastically reduce CO_2 emissions now, however, we will still feel certain effects of climate change. In Hawai‘i, science indicates that this will likely include:

- More frequent and more severe storms that can increase runoff and siltation;
- Overall, less rainfall and therefore less fresh water;
- Higher temperatures that affect watershed and agricultural health, while being beneficial to invasive species;
- Sea level rise and high waves that will harm coastal areas and groundwater systems;
- Ocean acidification that will inhibit the growth of protective coral reefs.

In response, we must plan and implement mitigative and adaptive measures to ensure the resilience of our natural and human systems. Protecting and enhancing the health of our forested watersheds as proposed by the Department of Land and Natural Resources is one critically important initiative. Likewise, investing in local energy and agriculture security are essential components of building self-reliance and resilience here in the middle of the Pacific Ocean.

Using the barrel tax revenue for its originally intended purposes and extending the sunset date is a wise investment in our future. We urge your support.

Senate Committee on Ways and Means

RE: SB2196 SD1

February 19, 2014 9:25 a.m., Room 211

Chair Ige and Members of the Committee:

As a member of the rate and tax-paying public, I **OPPOSE** this measure. Because such "special funds" are earmarked, there is little legislative oversight or public review or scrutiny. This increases the lack of transparency, for which the Legislature and administration have recently been increasingly criticized. All such "special funds" should be abolished and the barrel tax placed in the state's general fund.

I specifically object to so much of this measure as would establish an "energy systems development special fund" to be administered by the University of Hawai`i, Hawai`i Natural Energy Institute, for the following reasons:

This article appeared in Honolulu's Civil Beat on January 23, 2014:

Dear Elected Officials (of the 2014 Legislature):

"Are the Hawaii Natural Energy Institute and General Electric cashing in on Hawaii taxpayers?"

Dear Legislators:

You might have noticed that Lānaʻi voices against Big Wind have been pretty quiet lately.

This is because we've been assured that Big Wind on Lānaʻi is no longer a substitute for what should be the state's energy policy. Even Neil said so when he was here on June 29, 2013, and met with twenty-five residents at our Senior Center. ("Don't worry, people, it's not going to happen!")

So you can imagine my surprise to see Big Wind/ Lānaʻi a centerpiece of the Public Utilities Commission (PUC)-sponsored "briefing" at the Capitol on January 9.

The briefing was called so a "Team" from General Electric (GE) could explain the results of a "Hawaii RPS Roadmap Study," an assessment of the utilities' (HECO, MECO, HELCO and KIUC) progress in achieving the state's Renewable Portfolio Standards (RPS).

Yes, Elected Officials, yet again another study - for which Hawaii Natural Energy Institute (HNEI) will pay GE $850,000 - to see if the utilities can meet the RPS with lots of new wind, solar, and quite the focus on a one-way cable from Lānaʻi. They tried to hide it, of course, mapping out a 200 MW cable between O`ahu and Lānaʻi while insisting there was "*no specific project evaluated.*" Please, GE, for real? Lānaʻi wind and the one-way cable showed up over 20 times in your handouts (at least it did in the version GE/HNEI passed out January 9; "revisions" have been made since then…)

Other “stakeholders” in the audience were HECO staffers, PUC staffers (and ex-PUC staffers who are now HECO staffers), the Consumer Advocate, DBEDT, and folks from the HNEI, which is part of the University of Hawaii, all talking to themselves about an electricity future that is, well -- highly unlikely.

Not that these stakeholders would admit to such a thing. Instead, PUC staffer Jay Griffin (who used to work for HNEI) reviewed a recently-submitted Report to the Legislature that confirms the utilities will likely meet their renewable generation targets of 15% by 2015 and 25% by 2020. But 40% by 2030? Not so clear: Griffin spoke instead of “significant challenges” and “uncertainties,” difficulties in “siting” and “permitting.”

One of Griffin’s statements really caught my eye: “If we do have some inter-island connectivity and generation, **we assumed about 200 MW of wind here** [read: Lānaʻi] **that would significantly cut down the required new generation..**.” Since the 200 MW Griffin wants to take from Lānaʻi would in fact be “new” generation, we can assume he is proposing Lānaʻi take it on the chin so O`ahu doesn’t have to cover so much of its own “new” generation needs, or use up its own lands. Thanks, Jay.

Anyway, the GE Team reviewed colorful pie charts and busy graphs displaying peaking and cycling units, forecasted energy sales, various cable configurations, and postulated potential savings if we linked ourselves together. Or not. They confirmed that O`ahu could meet significant renewable levels on-island (34%), no cable needed, and then focused on the proposed “benefits” of a grid-tie to Maui and a one-way extension cord from Lānaʻi. I didn’t hear any chatter about the fact that O`ahu needn’t meet 40% renewable generation on its own, but can aggregate with renewable levels on Maui (currently 21%) and the Big Island (47%), and there was no mention that the PUC has already decided that utility shareholders, not ratepayers, will pay any penalty slapped on the utilities for not meeting the RPS. I guess it’s all about how you frame the conversation.

Of course GE admitted that because the real cost of a one-way cable from Lānaʻi is unknown, we should assume that: “More capital intensive scenarios [such as Big Wind on Lānaʻi] become less attractive as the cost of capital increases.” Really? I’m so glad we paid the GE Team to share this; I would never have guessed.

As the morning session concluded, Representative Cynthia Thielen (R- Kailua/Kaneohe) weighed in, pointing out that this GE study (like so many others before it) did not include any renewable firm power, such as wave technology:

> *“We’re a very scarce land mass, and land is very precious. So, how do you go and do a report ignoring one of Hawai`i’s best renewable resources? When one branch of the federal government, the Department of Energy, says Hawaii is ripe for wave energy, why is wave energy not in here? You’ve got money to do this study, it doesn’t have to be narrow. I’m finding [the GE report] very incomplete and very troublesome.”*

After lecturing Rep. Thielen on the fact that wave energy is not ready for commercial prime time, HNEI’s Rick Rocheleau assured her he would “throw some wave in.” The GE Team then admitted that expanding O`ahu’s ability to convert its trash to firm power was not included either. No worries, HNEI and GE said, “There’s a lot more to go in the study” and “continued research is necessary.”

I looked to see if any environmental costs analyses or community impacts were included in this "continued research," or any evidence of the bottom-up planning Rep. McKelvey and others spoke of last Legislative session? Apparently not relevant.

Truth be told, Elected Officials, this GE Roadmap study doesn't look much different than the one for which ratepayers are already repaying HECO to the tune of $4 million, and it's strikingly similar to many of the results presented in the recently completed – and criticized - Integrated Resource Planning (IRP) process, a core focus of which was to consider how and whether the utilities could meet the state's RPS. You may recall that at the conclusion of the IRP process last May the utility said it doesn't need Lāna'i, or an undersea cable to or from anywhere, to meet the RPS. DBEDT opined along similar lines a few weeks later.

Now, the GE Roadmap comes on the heels of at least five other known studies we have paid GE to participate in since 2008: "Sustainable Energy Options/Big Island" (cost unknown); "Maui Wind Integration" (costs redacted); "Oahu Wind Integration" ($473,972); "Hawaii Solar Integration" (your guess?); and the "O`ahu-Maui Interconnection Study-Stage 2" ($405,000). That's at least $1,728,972 of our tax and rate dollars paid to the GE Team. So far.

And HNEI appears to be doing quite well for itself as well: according to a 2013 report to the Legislature, its budget grew from $2 million in 2001 to over $22 million for 2012-2013. That's a 1,000% increase, if my math is correct. A factoid to keep in the forefront, Legislators, as agencies line up for budget requests this session. For sure, HNEI is doing some nifty things. But continuing to study and promote Big Wind on Lāna'i? Perhaps HNEI and GE need to use a little more "imagination at work."

So we ask you, our Elected Officials, to ask yourselves: is this how we should continue to spend millions of our dollars? Perhaps we should spend those millions on fixing the grid, instead of endlessly studying to fix the grid?

After Neil's last visit, someone suggested we consider retiring our all-over-town "NO WINDMILLS ON LANA`I" signs, since they were no longer necessary. We think we'll leave them up a while longer, since we are again reading what looks like another tax-payer funded study that has Big Wind on Lāna'i as a favored solution. No matter, the troops are easily charged up, eager to continue to rail against the potential loss of up to ¼ of our island and its historic cultural sites, to fight to protect and preserve our wildlife and sea life, and insure our energy independence.

Hey, HNEI and GE: thanks for the head's up.

Mahalo for the opportunity to testify.

Sally Kaye
511 Ilima Ave.
Lāna'i City, HI 96763

From:	mailinglist@capitol.hawaii.gov
To:	WAM Testimony
Cc:	mendezj@hawaii.edu
Subject:	*Submitted testimony for SB2196 on Feb 19, 2014 09:25AM*
Date:	Sunday, February 16, 2014 9:49:55 AM

SB2196

Submitted on: 2/16/2014

Testimony for WAM on Feb 19, 2014 09:25AM in Conference Room 211

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

Comments:

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From: mailinglist@capitol.hawaii.gov
To: WAM Testimony
Cc: carl.campagna@kamakagreen.com
Subject: *Submitted testimony for SB2196 on Feb 19, 2014 09:25AM*
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SB2196

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Carl	Individual	Support	No

Comments:

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