NEIL ABERCROMBIE
Governor

SCOTT E. ENRIGHT
Chairperson, Board of Agriculture

KEN H. KAKESAKO
Deputy to the Chairperson

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 HOUSE COMMITTEE ON ENERGY & ENVIRONMENTAL PROTECTION
THURSDAY, MARCH 13, 2014
9:00 A.M.
Conference Room 325

SENATE BILL NO. 2196 SD2
RELATING TO ENERGY

Chairperson Lee and Members of the Committee,

Thank you for the opportunity to testify on Senate Bill 2196 SD2. 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/House Bill 2256.

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.

NEIL ABERCROMBIE
GOVERNOR OF HAWAII

LINDA ROSEN, M.D., M.P.H.
DIRECTOR OF HEALTH

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

In reply, please refer to:
File:

HOUSE COMMITTEE ON ENERGY AND ENVIRONMENTAL PROTECTION

S.B. 2196 S.D. 2, RELATING TO ENERGY

Testimony of Linda Rosen, M.D., M.P.H.
Director of Health

March 13, 2014
9:00 a.m.

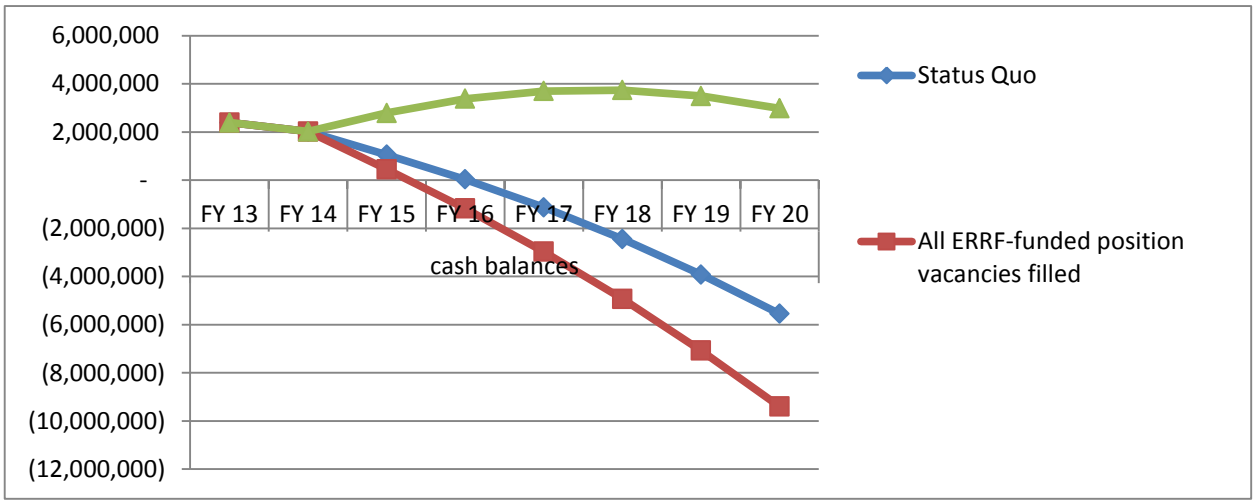
Department's Position: The Department of Health **STRONGLY SUPPORTS** this measure because it will further the State's ability to rapidly respond to hazardous material releases and environmental threats by assuring operational continuity and avoiding significant reductions in staff.

Fiscal Implications: This measure's proposed increase in the total per barrel allocation from the Environmental Response, Energy, and Food Security Tax (Barrel Tax) into the ERRF will help secure the Department's ability to quickly, comprehensively, and effectively respond to hazardous material releases and environmental threats to ensure public safety. The Department requests a 10 cent increase in Barrel Tax allocation (from 5 to 15 cents). Decreases in revenue over the past several years have eroded the ERRF balance to critical levels, and a ten cent increase in Barrel Tax allocation will allow the Department to continue to support essential functions. 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's proposed increase in the total per barrel allocation from the Barrel Tax into the ERRF will help 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. The Department requests a 10 cent increase in Barrel Tax allocation (from 5 to 15 cents) so that it can continue to support its essential functions.

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 testimony on this important measure.

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 Chris Lee, Chair
and Members of the House Committee on Energy & Environmental Protection

Date: Thursday, March 13, 2014
Time: 9:00 A.M.
Place: Conference Room 325, State Capitol

From: Frederick D. Pablo, Director
Department of Taxation

Re: S.B. No. 2196, S.D.2, Relating to Energy

The Department of Taxation (Department) appreciates the intent of S.B. 2196, S.D.2, and provides the following comments for your consideration.

S.B. 2196, S.D.2, re-establishes the energy systems development special fund, and modifies 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.2, 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.

UNIVERSITY OF HAWAIʻI SYSTEM
Legislative Testimony

Testimony Presented Before the
House Committee on Energy and Environmental Protection
Thursday, March 13, 2014 at 9:00am
by
Richard Rocheleau, Director
Hawaiʻi Natural Energy Institute
School of Ocean and Earth Science and Technology
University of Hawaiʻi at Mānoa

SB 2196 SD2 – RELATING TO ENERGY

Chair Lee, Vice-Chair Thielen, 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 SB 2196 SD2, which would re-establish the Energy Systems Development Special Fund (ESDSF) and extend the repeal of barrel tax allocations until 2030. While the current draft of the bill leaves blank the amounts of the barrel tax allocations, HNEI believes the statutory 10 cent allocation to the ESDSF is appropriate and sufficient.

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 Hawaiʻi 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 Hawaiʻi specific projects that could not be directly funded by federal dollars. These include testing of emerging technologies for future deployment in Hawaiʻi 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.

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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 Hawaiʻi (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 Hawai‘i. 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 Hawai‘i. 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 Hawai‘i. In addition to this federal investment which might not otherwise have occurred, this work will provide Hawai‘i 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.

- Hawai‘i 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 Hawai‘i is committed to advancing its energy policy initiatives and developing efficient and economic technologies that will help ensure Hawai‘i continues to move forward to meet its clean energy goals.

Thank you for the opportunity to testify.

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

COLLEGE OF SOCIAL SCIENCES
HAWAII ENERGY POLICY FORUM
UNIVERSITY OF HAWAI'I AT MĀNOA

Sharon Y. Moriwaki
Co-chair, Hawaii Energy Policy Forum
Before the
House Committee on Energy & Environmental Protection
Thursday, March 13, 2014 at 9:00 a.m.
Conference Room 325

IN STRONG SUPPORT OF SB 2196 SD2– Relating to Energy

Chair Lee, Vice Chair Thielen and Members:

The Hawai'i Energy Policy Forum, an organization, created in 2002, is comprised of 46 representatives from Hawaii's electric utilities, oil and natural gas suppliers, environment and community groups, renewable energy industry, and federal, state and local government, including the neighbor islands. Our vision, mission, and comprehensive "10 Point Action Plan" serve as our guide in advancing Hawai'i's preferred energy goals.

SB 2196 SD2 proposes amendments to (1) ***Section 304A, Hawai'i Revised Statutes (HRS),*** to re-establish the energy systems development special fund ("ESDSF"), including its purposes, periodic evaluation, and action plan; (2) ***Section 243-3.5, HRS***, to amend allocation amounts (hopefully increasing the allocation) from revenues generated by the barrel tax to the environmental response revolving fund, energy security special fund, the ESDSF (reinstating 10 cents), and the agricultural development and food security special fund; and (3) extends the repeal of the amendments to June 30, 2030.

The Forum has supported the barrel tax and its uses as the only way to consistently provide the significant funding and investment needed to attain Hawai'i's ambitious clean energy goals -- 70% clean energy by 2030 -- by expanding renewable energy, conservation and energy efficiency, supporting research and development of alternative energy sources, including storage and transmission, and ensuring the security and reliability of energy supply and distribution.

The Forum cannot emphasize enough the need to reinstate the energy systems development special fund which is critical for the continuing development of the technologies that enable Hawai'i to develop the infrastructure to expand our use, transmission, and storage of reliable and stable renewable energy for our electrical sector and explore production of locally produced renewable fuels (Section 2).

The Forum also believes that consistent and long-term financing is required to transform past technologies and sources of energy –both in the electrical and transportation sectors, as provided in this bill. The State must invest in that future regardless of our fiscal condition or the price of oil. We must stay the course to that commitment, continuing the barrel tax and funding until 2030 – the date when we will be using 70% clean energy.

During upturns in the economy, as the Governor reports this year, we should increase the allocations to fund programs that will accelerate our progress toward clean energy. We therefore strongly support SB 2196 SD2 and its continuing barrel tax generation and allocations to invest in the state's long-term energy and food sustainability.

Thank you for the opportunity to testify.

The Nature Conservancy
Protecting nature. Preserving life.

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 SD2 Relating to Energy
House Committee on Energy and Environmental Protection
Thursday, March 13, 2014, 9:00AM, Room 325

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 SD2 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.

HOUSE COMMITTEE ON ENERGY & ENVIRONMENTAL PROTECTION
Thursday, March 13, 2014 – 9:00 a.m. – Room 325

Ulupono Initiative Strongly Supports SB 2196 SD 2, Relating to Energy

Dear Chair Lee, Vice Chair Thielen, and Members of the Committee:

My name is Kyle Datta and I am general partner of the Ulupono Initiative, a Hawai'i-based impact investment firm that strives to improve the quality of life for the people of Hawai'i by working toward solutions that create more locally grown food, increase renewable energy, and reduce/recycle waste. Ulupono invests in projects that have the potential to create large-scale, innovative change.

Ulupono strongly supports SB 2196 SD 2, which will redistribute the Environmental Response, Energy and Food Security Tax on barrels of petroleum products to restore the original intent of lawmakers in funding vital sustainability measures to help make our community more self-sufficient.

This tax was designed to support critical investments in clean energy, local agricultural production, and environmental response, reduce the State's dependence on imported fossil fuels and food products, and support environmental activities and programs. The tax represents a balanced approach to public policy where greater fossil fuel consumption would create more funding for these initiatives. Meanwhile, as fossil fuel use is reduced, the money collected from the residents of Hawai'i is also reduced. During difficult economic times, the fund was intended to be diverted temporarily toward the general fund. However, funding has yet to be restored to its original purpose, while not aligning the incentives of the barrel tax with its environmental restoration purposes.

This bill also extends the scheduled repeal date of the tax from 2015 to 2030 to match funding with the Hawai'i Clean Energy Initiative 2030 goals. Since agriculture, energy, and conservation work requires consistent and sustained funding, extending this funding source will also encourage better long-term planning by practitioners.

We believe that working together we can help produce more local food, reduce our dependence on fossil fuels, and strengthen our community. Thank you for this opportunity to testify.

Respectfully,

Kyle Datta
General Partner

Email: communications@ulupono.com

Pacific Guardian Center, Mauka Tower
737 Bishop Street, Suite 2350, Honolulu, HI 96813

808 544 8960 o | 808 544 8961 f
www.ulupono.com

Chamber of Commerce HAWAII
The Voice of Business

Testimony to the House Committee on Energy and Environmental Protection
Thursday, March 13, 2014 at 9:00 A.M.
State Capitol - Conference Room 325

RE: SENATE BILL 2196 SD2 RELATING TO ENERGY

Chair Lee, Vice Chair Thielen, and members of the committee:

The Chamber of Commerce of Hawaii **opposes** SB 2196 SD2 Relating to Energy.

The Chamber is the largest business organization in Hawaii, representing more than 1,000 businesses. Approximately 80% of our members are small businesses with less than 20 employees. As the "Voice of Business" in Hawaii, the organization works on behalf of its members, which employ more than 200,000 individuals, to improve the state's economic climate and to foster positive action on issues of common concern.

The Chamber supports renewable energy development as part of Hawaii's future. At the same time, the Chamber would like to see a review of the funds spent and the benefits to the taxpayer before this bill is enacted. These taxes affect both business and consumers and the programs should be reviewed to see if the programs receiving these funds were effective before increasing the tax.

Thank you for the opportunity to express our views on this matter.

1132 Bishop Street, Suite 402 • Honolulu, Hawaii 96813 • Phone: (808) 545-4300 • Facsimile: (808) 545-4369

ADA HAWAI'I
AMERICANS FOR DEMOCRATIC ACTION

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MAILING ADDRESS
PO. Box23404
Honolulu
Hawai'i 96823

March 11, 2014

TO: Chair Chris Lee, Vice Chair Cynthia Thielen
Members of the House Committee on Energy and Environmental Protection

FROM: John Bickel, President
Americans for Democratic Action/Hawai'i

RE: Support and Comments on SB 2196 SD2 Relating to Energy

Americans for Democratic Action/Hawaii support SB 2196 SD 2. We find the goals of this bill admirable: developing an integrated approach to and portfolio management of renewable energy and energy efficiency technology projects that will reduce Hawaii's dependence on fossil fuel, imported oil, and other imported energy resources and move Hawaii toward energy self-sufficiency. Taxing oil by the barrel is a good place to start as it discourages that fossil fuel. We do hope that there is good oversight for the expenditure of these monies in the development of renewable energy. Please give it your most favorable consideration.

L E G I S L A T I V E

TAXBILLSERVICE

126 Queen Street, Suite 304 TAX FOUNDATION OF HAWAII Honolulu, Hawaii 96813 Tel. 536-4587

SUBJECT: FUEL, Reallocate environmental response, energy, and food security tax

BILL NUMBER: SB 2196, SD-2

INTRODUCED BY: Senate Committee on Ways and Means

EXECUTIVE SUMMARY: Initially, the 5 cent per barrel environmental response tax was established to address oil spills in state waters. It was temporarily increased to $1.05, much of which was earmarked to numerous special funds, and was scheduled to sunset on 6/30/15. The tax has taken on a life of its own and lacks transparency, and the special funds it feeds do not come under close scrutiny by either lawmakers or the public. The barrel tax should be repealed and all programs funded out of the environmental response tax should be funded through the general fund.

BRIEF SUMMARY: Amends HRS section 243-3.5 to increase the amount deposited into the environmental response revolving fund from 5 cents to ___ cents, increases the amount deposited into the energy security special fund from 15 cents to ___ cents, and increases the amount deposited into the agricultural development and food security fund from 15 cents to ___ cents.

Adds new sections to HRS chapter 304A to reenact the energy systems development special fund and the periodic evaluation and plan of action requirements of the special fund.

Amends Act 73, SLH, 2010, to extend the sunset date for the various allocations of the environmental response, energy, and food security tax from June 30, 2015 to June 30, 2030.

EFFECTIVE DATE: July 1, 2050

STAFF COMMENTS: The legislature by Act 300, SLH 1993, enacted an environmental response tax of 5 cents per barrel on petroleum products sold by a distributor to any retail dealer or end user. The collections of the tax were deposited into the environmental response revolving fund until such time the balance in the fund reached $7 million at which time the imposition of tax was suspended until the balance in the fund declined to less than $3 million, at which time the imposition would be reinstated.

The legislature by Act 73, SLH 2010, increased the amount of the tax to $1.05 per barrel and provided that 5 cents of the tax shall be deposited into a newly established environmental response revolving fund; 15 cents shall be deposited into a newly established energy security special fund, 10 cents shall be deposited into a newly established energy systems development special fund; 15 cents shall be deposited into the newly established agricultural development and food security special fund; and the residual of 60 cents shall be deposited into the general fund between 7/1/10 and 6/30/15. This measure would increase the amount deposited into the various funds and extend the allocations to these special funds which were scheduled to sunset on 6/30/15.

The environmental response tax was initially adopted for the purpose of setting up a reserve should an oil spill occur on the ocean waters that would affect Hawaii's shoreline. The nexus was between the oil importers and the possibility that a spill might occur as the oil product was being imported into the state. Now that the fund has become a cash cow, lawmakers have placed other responsibilities on the fund, including environmental protection, food security, and natural resource protection programs, energy conservation and alternative energy development, air quality, global warming, clean water, polluted runoff, solid and hazardous waste, drinking water, and underground storage tanks, including support for the underground storage tank program of the department of health.

The basic problem with the barrel tax is that it lacks transparency, and because the funds are earmarked they do not come under close scrutiny by either lawmakers or the public. Rather than perpetuating the problems of the barrel tax, it should be repealed and all programs that are funded out of the environmental response fund should be funded through the general fund. At least program managers would then have to justify their need for these funds. If general funds are insufficient to underwrite all the essential programs and programs such as those funded through the barrel tax, then lawmakers need to justify any increase in taxes which underwrite the general fund or lawmakers will be forced to set priorities for those precious general funds. Currently, lawmakers are able to side step that difficult task by creating these hidden taxes and earmarked funds like the barrel tax. By continuing to special fund these programs, it makes a statement that such programs are not a high priority for state government. This sort of proliferation of public programs needs to be checked as it appears to be growing out of hand and at the expense of the taxpayer.

Digested 3/12/14

Testimony of Hawai'i Green Growth
In Support of Portions of SB 2196 SD2 Relating to Energy

House Committee on Energy & Environmental Protection

13 March 2014, 9:00am
Conference Room 325

Audrey Newman
Hawai'i Green Growth
P.O. Box 535 Ho'olehua, Hawai`i 96729

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

I am writing on behalf of Hawai'i Green Growth (HGG) in **support of two key provisions in SB 2196 SD2.** We strongly support all three increased allocations of revenue from the Environmental Response, Energy and Food Security Tax (Barrel Tax) and extension of the sunset date to June 30, 2030. These are top priorities agreed by HGG members for legislative action to significantly advance sustainability in Hawai'i.

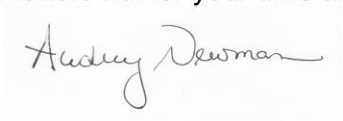
HGG is a multi-sector partnership committed to achieving a resilient, sustainable Hawai'i. HGG's members include more than 80 leaders and advisors from government, business and non-profit organizations across the energy, food, environment, green jobs and other sectors.

HGG strongly supports full allocation of the barrel tax to its original purpose – to provide essential sustained support to state agencies leading our clean energy, food security and emergency environmental response programs – as soon as this is fiscally feasible. We greatly appreciate this bill's significant increase in allocation to each of the three lead agencies.

Barrel tax support is critical to development and implementation of actions that will achieve the Hawai'i Clean Energy Initiative's goal to reduce the State's dependence on imported fossil fuels by 70% in 2030. It also provides critical, ongoing support for Department of Agriculture programs aimed to at least double local food production by 2030, which is another 2030 target strongly endorsed by Hawai`i Green Growth. Extending the sunset date to 2030 aligns the Legislature's funding commitment with achieving these statewide targets.

We ask you to support these two essential provisions in this bill to increase and ensure critical investments that will allow these sectors to achieve their goals in increasing Hawai'i's self-sufficiency. These investments will help build a more diversified economy and a more resilient and sustainable future for everyone in Hawai'i.

Mahalo nui for your time and consideration,



Audrey Newman
Senior Advisor & Coordinator, Hawai'i Green Growth (HGG)
Bringing leaders together to achieve sustainability in Hawai'i & be a model for a green economy

REACH
RENEWABLE ENERGY ACTION COALITION OF HAWAII
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Testimony of ERIK KVAM
President of Renewable Energy Action Coalition of Hawaii
e-mail: Kvam@REACHawaii.org

In SUPPORT of SB 2196 SD 2 RELATING TO ENERGY

Before the
HOUSE COMMITTEE ON ENERGY & ENVIRONMENTAL PROTECTION

Thursday, March 13, 2014 9:00 a.m.

Aloha Chair Lee, Vice-Chair Thielen 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 2.

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 need 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 tax on

each barrel of petroleum product ("Barrel Tax"). The Fund apparently was repealed on June 30, 2013.

REACH **SUPPORTS** SB 2196 SD 2 – re-establishing the Fund, providing a tax of so many 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.

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

March 13, 2014
9:00 a.m.

MEASURE: S.B. No. 2196, S.D. 2
TITLE: Relating to Energy

Chair Lee 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 designate 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.

Accordingly, the Commission asks that the Committee reinsert the current Barrel Tax allocation to the Energy Systems Development Special Fund of 10 cents per barrel, which is blanked out in this measure. However, the Commission would defer to any guidance from HNEI as to the proper allocation level.

Thank you for the opportunity to testify on this measure.

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

RE: SB2196 SD2

March 13, 2014 9:00 a.m., Room 325

Chair Lee 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 Oʻahu 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: Lāna'i] **that would significantly cut down the required new generation...**" Since the 200 MW Griffin wants to take from Lāna'i would in fact be "new" generation, we can assume he is proposing Lāna'i 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 Lāna'i. 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 Lāna'i is unknown, we should assume that: "More capital intensive scenarios [such as Big Wind on Lāna'i] 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

HADA testimony in STRONG SUPPORT
of SB2196
Relating to Energy

Presented to the House Committee on Energy & Environmental Protection
At the public hearing to be held
9 a.m. Thursday, March 13, 2014
in Conference Room 325, Hawaii State Capitol

LATE

by the Members of the Hawaii Automobile Dealers Association
Hawaii's franchised new car dealers

Chairs Lee, Vice Chair Thielen, and Members of the Committee:

Some hydrogen fuel cell vehicles are already being marketed in California. Hyundai has taken a leadership position. Several manufacturers plan to roll out their Fuel Cell Electric vehicles shortly thereafter in 2017.

In our association's continuing support of the State's clean energy goals, HADA offers the association's STRONG SUPPORT of SB2196 –a bill which proposes to re-establish the energy systems development special fund, which was repealed on June 30, 2013. This fund can assist in the development of infrastructure for Fuel Cell Electric vehicles.

HADA applauds legislative leaders for consideration of this measure. For the new Fuel Cell Electric vehicles to arrive, new fueling facilities must also arrive on relatively the same time line in Hawaii—creating a chicken and the egg concomitant rollout of hydrogen fuel cell product and the hydrogen fueling stations.

A February 4, 2013 *Automotive News* story by David Sedgwick and Gabe Nelson reports that "the biggest barrier to the technology may be the lack of fuel stations."

This measure seeks to help address this hydrogen fueling station barrier for Hawaii.

--continued next page—

Continuing our quote from the *Automotive News* story :

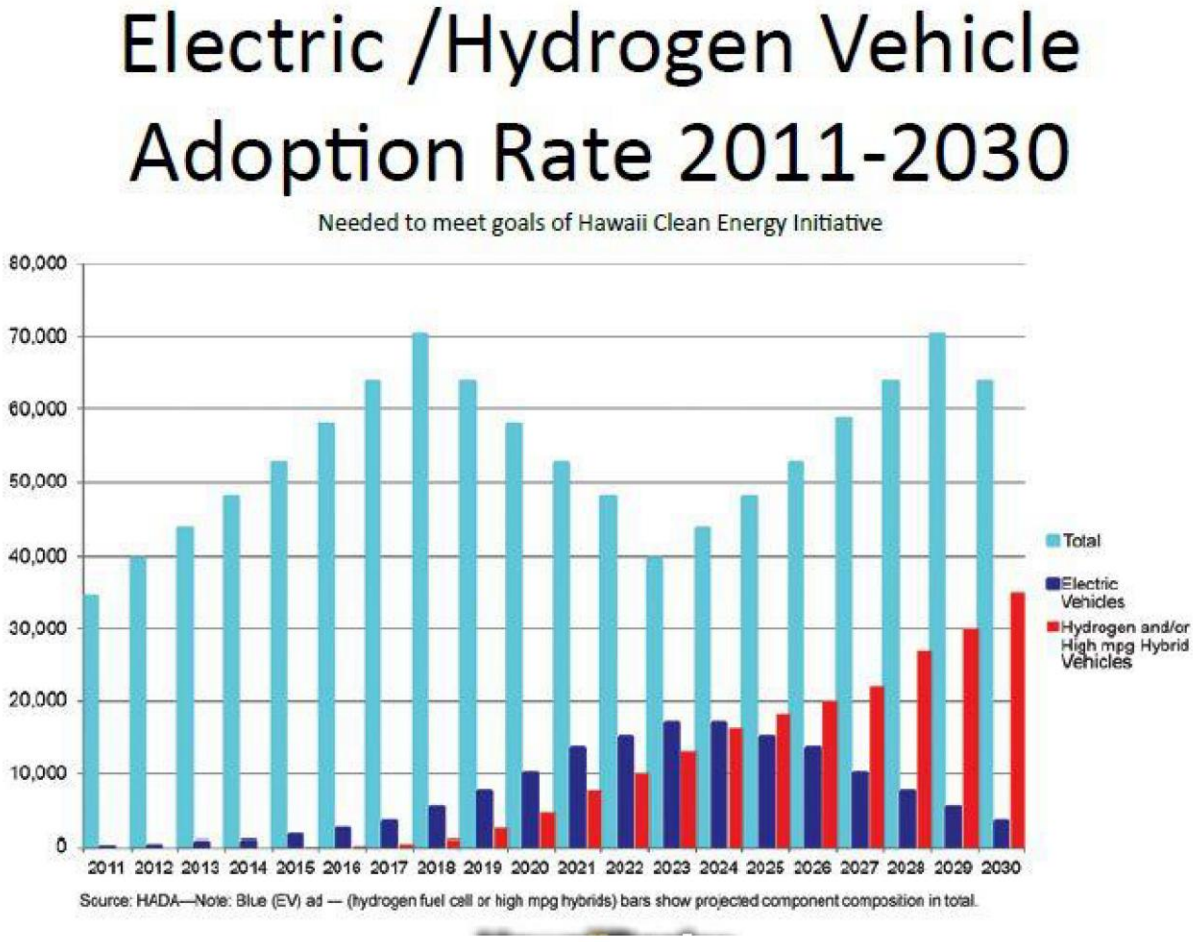
- "….(California's) energy commission has earmarked $28.6 million for new facilities.

- Toyota and BMW last month announced a fuel cell production alliance, and last week Daimler, Ford, and Nissan said they would join to develop a line of affordable fuel cell cars for sale as early as 2017.

- 'We can't deploy them (HFC vehicles) to consumers unless they have a place to refuel,' said Steve Ellis, Honda's U.S. Manager of sales and marketing for fuel cell vehicles.'"

(Source: *Automotive News* "Fired up for fuel cells," Feb. 4, 2013)

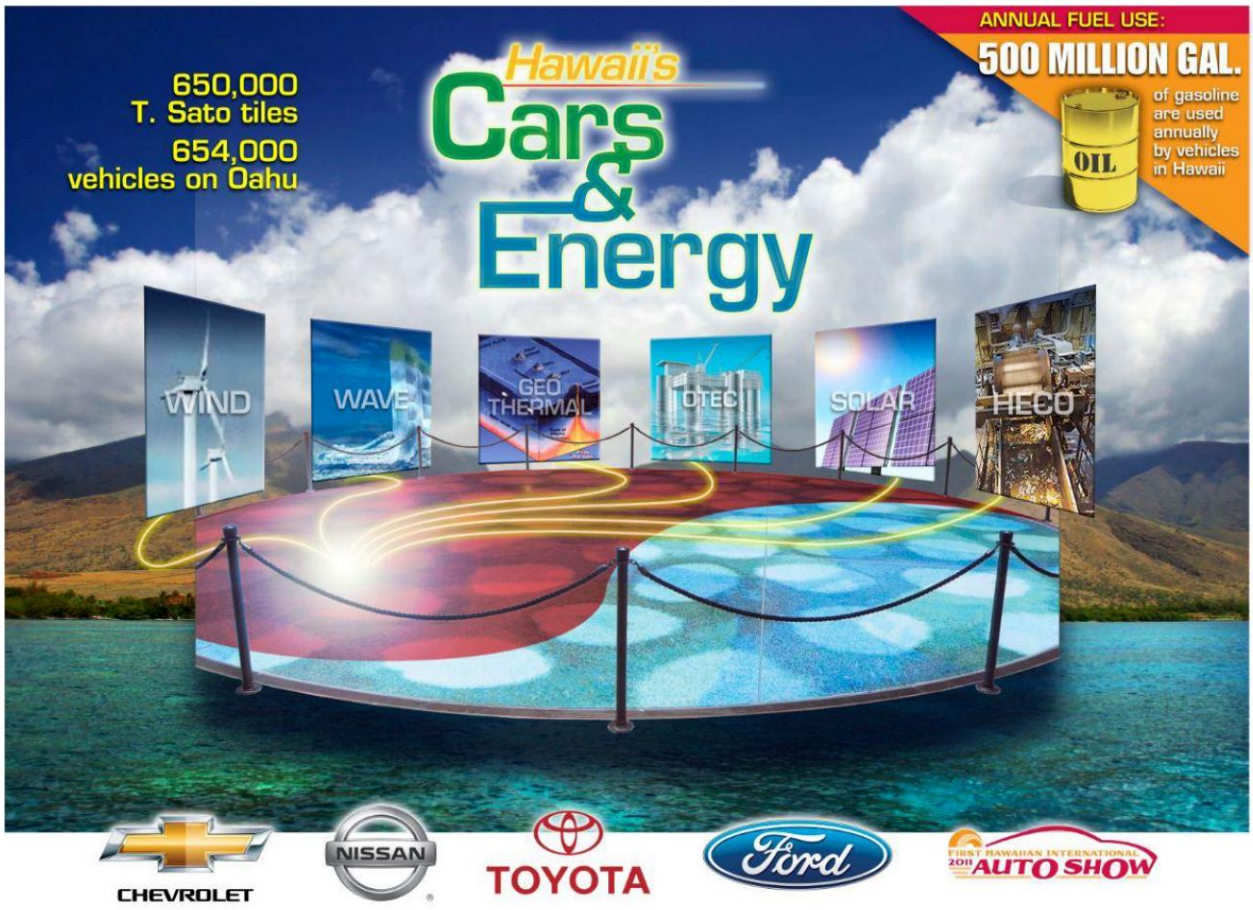
HADA developed the following uptake rate of renewable fuel vehicles which is needed to meet the goals of the Hawaii Clean Energy Initiative.



The hydrogen fuel cell car can be considered to be part what is known as the electrification of the car – a transformation to renewable energy that is taking place in the retail auto industry.

The electrolysis process utilizing Hawaii's abundant renewable energy resources—separates hydrogen from its oxygen molecule to create hydrogen gas. In the fuel cell vehicle the hydrogen is reunited with oxygen creating an electric current that powers a car's electric motor, with the by-product being H_20 from the tailpipe.

HADA produced the following chart to show how use of Hawaii's abundant renewable energy resources in vehicles, along with fuel-efficiency in gas vehicles, can reduce fossil fuel usage on Hawaii's roadways. Thereby draining the 500-million-gallon oil barrel, representing the state's annual fossil fuel usage in transportation, to 150 million gallons a year, in a little under 20 years.



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This bill provides some early indication that Hawaii is preparing for Fuel Cell Electric vehicles. Providing benefits for early adopters will encourage early uptake of these vehicles.

With the passage of this bill, these benefits will be awaiting these early adopters.

A key factor, of course will be availability of hydrogen fuel. "Five nines"-- 99.999% is the term used in the industry for purity levels needed. This is costly to produce.

We understand that if electric power is made available, from currently-curtailed energy producers in off-peak hours, like from those power producers using wind energy, or geothermal energy, then hydrogen plants can use electrolysis of water to produce significant amounts of five nines hydrogen. Current estimates indicate that if power is purchased in the 7-cent per kilowatt hour price range then a kilogram of hydrogen can be produced at a cost that favorably compares to gasoline. Some say a kilogram can propel a Fuel Cell Electric vehicle for about 40 miles—twice the distance of a 20 mpg gasoline car, at about twice the price for of a gallon of gas. Two times the distance at two times the cost of a gallon of gas makes hydrogen available in rough parity with the gasoline price.

All this, of course, relates to the capability to obtain inexpensive electricity. Or, to see the State assist in developing hydrogen fueling stations with accompanying photovoltaic cell arrays which produce enough power for the electrolysis process.

Some use of the current barrel tax for this purpose would put Hawaii on the path to becoming an early hydrogen fuel cell market for these emerging vehicles.

With all these considerations in mind, HADA urges sending an early signal to automakers, federal policy makers, and others, that Hawaii is preparing for the hydrogen economy. We encourage the joint committee to pass SB2196.

Note: please also see following information relating to "The Chart" on page 2 which illustrates the needed hydrogen fuel cell electric vehicle uptake year-by-year to fulfill the goals of the Hawaii Clean Energy Initiative.

It's known as

THE CHART

...and it reflects HADA's view of what uptake is necessary to hit the goals of the HCEI

THE CHART, as it has become known, shows that HADA has incorporated almost all the ideas presented at the State Energy Forum's Transportation Working Group meetings and DBEDT's Transportation Working Group meetings over the years. Dealers anticipate a slightly slower rate of private vehicle adoption growth going forward over the 20-year period (2011-2030) because of 1) slightly higher transit use from a train's operation 2) higher bicycle use from the addition of bike lanes 3) higher car sharing from the introduction of ZIPCAR and other such sharing 4) higher car-pooling because of traffic congestion 5) higher housing density in the Honolulu urban core necessitating fewer cars per household, etc.

The attached chart is used by many planners—including shipping companies, banks, finance and insurance product sellers, even the state legislature to help figure out expected tax revenues — because new car sales are a key indicator of GET revenues.

THE CHART reveals what will be required in market uptake of renewable fuel vehicles, we believe, in order to meet those goals.

Use of the barrel tax ($1.05 / barrel) for its intended purpose — the development of renewable energy so as to meet the goals of the Hawaii Clean Energy Initiative-- is needed. Public policy that directs these funds to these efforts would move things forward in meeting the goals of the HCEI.

Respectfully submitted,

David H. Rolf, on behalf of the members of the Hawaii Automobile Dealers Association.
PH: 808 593-0031 Email: drolf@hawaiidealer.com

LATE

Hawaii Center for Advanced Transportation Technologies
531 Cooke Street, Honolulu, HI 96813 * Ph: 808-594-0100 * Fax: 808-594-0102

Statement of
STANLEY OSSERMAN, DIRECTOR
Center for Advanced Transportation Technologies, before the
HOUSE COMMITTEE ON ENERGY & ENVIRONMENTAL PROTECTION
13TH day, March 2014, 9:00 a.m.
State Capitol, Conference Room 325
In consideration of
SB 2196 SD2 RELATING TO ENERGY.

Chair Rep. Chris Lee, Vice Chairs Rep. Cynthia Thielen, and Members of the Committee on Energy and Environmental Protection

The Hawaii Center for Advanced Transportation Technologies (HCATT), is a program of the High Technology Development Corporation, and HCATT **supports** SB 2196 SD2 relating to Energy.

No other state in the nation has the variety of clean, renewable energy resources available to them like Hawaii. Our state has made considerable headway in many renewable areas, like wind and photo voltaic power, but we have not made the gains in the transportation sector that we would like. Plug-in Electric vehicles, and hybrid vehicles have reduced our dependence on imported oil, reduced pollution, helped promote clean transportation, and proven that Hawaii's people will do their part by purchasing cleaner vehicles, but we need to do much more! We need transportation solutions that capitalize on renewable energy to reduce Hawaii's carbon footprint.

Hydrogen gas, produced from water and using renewable energy, can help Hawaii get to its desired end-state of clean transportation. Hydrogen combined with air in a "fuel cell", produces electricity. Fuel cell electric vehicles are being manufactured by several major automakers today and will be on the roads in 2015. Hydrogen technology is proven, safe, and is rapidly becoming cost effective as the demand for clean energy push science and engineering ahead. HCATT's goal is to help Hawaii attain the best clean transportation solutions available. I ask that SB 2196 SD2 include funding included in this bill be directed to a Hydrogen Fund specifically to create the infrastructure that will bring the fuel cell vehicles, that manufacturers are designing and making, to Hawaii, so we can affect positive and real steps towards clean transportation in Hawaii. We wholeheartedly support SB 2196. Mahalo for the chance to offer comments.

LATE



HOUSE COMMITTEE ON ENERGY & ENVIRONMENTAL PROTECTION
March 13, 2014, 9:00 A.M.
Room 325
(Testimony is 4 pages long)

TESTIMONY IN STRONG SUPPORT OF SB 2196 SD2

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

The Blue Planet Foundation strongly supports SB 2196 SD2, 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 three amendments to this measure:

1. ***Inserting the following allocations for the $1.05 collected:***
   - ***5 cents for the environmental response revolving fund;***
   - ***42.5 cents for the energy security special fund;***
   - ***15 cents for the energy systems development fund;***
   - ***42.5 cents for the agricultural development and food security special fund.***
2. ***Eliminating the sunset dates on the barrel tax entirely for all sections; and***
3. ***Expanding 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 SD2 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 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,

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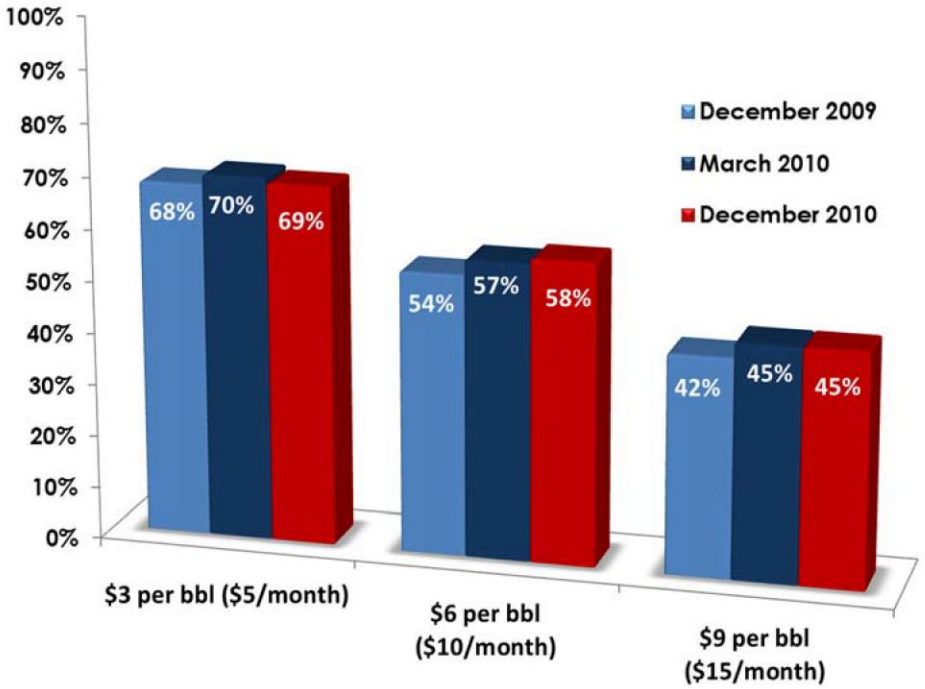
[1] *See* http://www.epa.gov/cleanenergy/energy-resources/refs.html
[2] *See* Tollefson, Methane Leaks Erode Green Credentials of Natural Gas, NATURE (January 3, 2013) (reporting "alarmingly high" leaks of 9% of well production).
[3] *See* Alvarez et al., Greater focus needed on methane leakage from 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.

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 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 on this page.*

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 SD2 with amendments to insert proper amounts to reallocate the barrel tax, expand the barrel tax to include other fossil fuels, and eliminate the sunset date for the tax and its allocations entirely.

Mahalo for the opportunity to testify.

WRITTEN ONLY

TESTIMONY BY KALBERT K. YOUNG
DIRECTOR, DEPARTMENT OF BUDGET AND FINANCE
STATE OF HAWAII
SE COMMITTEE ON ENERGY & ENVIRONMENTAL PROTECTION
ON
SENATE BILL NO. 2196, S.D. 2

LATE

March 13, 2014

RELATING TO ENERGY

Senate Bill No. 2196, S.D. 2, amends the amount of the Environmental Response, Energy, and Food Security Tax (i.e., Barrel Tax) deposited into the Environmental Response Revolving Fund currently set at 5 cents; amends the amount of the Barrel Tax deposited into the Energy Security Special Fund currently set at 15 cents; amends the amount of the Barrel Tax deposited into the Agricultural Development and Food Security Special Fund currently set at 15 cents; re-establishes the Energy Systems Development Special Fund and deposits into the fund, an amount to be determined, 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 (B&F) 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.

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, maintains the $1.05 per barrel charge through June 30, 2030, and extends the

current distribution of the Barrel Tax. This extension of the $18.2 million in general fund revenues is accounted for in the State's general fund financial plan. Consequently, any adjustments to the distribution of the Barrel Tax as proposed in this bill will result in a general fund revenue loss. In light of the most recent Council on Revenues forecast projections, measures such as Senate Bill No. 2196, S.D. 2, should be reconsidered for their negative impact to general fund revenues and the sustainability of related general fund programs throughout the State.