

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, 2012

**MEASURE:** S.B. No. 2981, S.D. 2  
**TITLE:** Relating to Renewable Energy

Chair Coffman and Members of the Committee:

**DESCRIPTION:**

This measure allows the Commission to direct electric utilities to include particular scenarios and resource options as part of each utility's integrated resource planning ("IRP"). Specific scenarios to be considered include 1) the replacement of fossil fuel-based electricity generation plants with electricity from firm renewable energy generation that is viable, indigenous, and cost-effective, and 2) the development of excess electricity to be transmitted between islands via an undersea electric transmission cable or other means. Potential resource options identified in this bill include 1) hydrogen and other energy storage methods for use in grid stabilization, and 2) electricity from waste-to-energy facilities. This bill also requires progress reports by the Commission for carrying out this measure, which will be included as part of the Commission's annual reports for both 2013 and 2014 required under HRS § 269-5.

**POSITION:**

The Commission supports the intent of this measure, but we suggest the Legislature use a resolution to communicate its scenario preferences and the review of methodology of calculating avoid costs to the Commission. The following comments are offered for the Committee's consideration.

**COMMENTS:**

The Commission commenced the consolidated IRP process for Hawaiian Electric Company, Inc., Maui Electric Company, Ltd., and Hawaii Electric Light Company through an order issued March 1, 2012. IRP is an in-depth review of a utility's resource plans over a forward-looking twenty year time horizon. The revised IRP framework, which was approved by the Commission in March 2011 ("Revised IRP"), calls for the development of scenarios as part of the planning process. The use of scenarios allows an electric utility to be adaptable and resilient to circumstances beyond the utility's control. For example, if there is a major technological breakthrough regarding the depths that could be reached in laying an electric transmission cable between Maui and Hawaii Island, the development of geothermal energy could be accelerated to meet the needs of a major load center like Honolulu. Scenario planning will, therefore, examine several of the State's most significant and probable energy futures, enhancing electric utilities' ability to respond to major technological advancements or other events. Unlike previous IRPs, the Revised IRP process will have the Commission select the members of the Advisory Group and retain the Independent Entity – the person or entity selected by the Commission to provide unbiased oversight to ensure compliance with the Revised IRP framework.

Given that the IRP process has just commenced and the Advisory Group has yet to be selected, the Commission would prefer that the Legislature instead use a resolution as the legislative means to recommend the consideration of specific IRP scenarios to the utilities and Advisory Group. The Commission would welcome the opportunity to assist the Committee in the drafting of a resolution.

Finally, the methodology behind existing avoided cost energy contracts is a very important issue, and the Commission is considering closer scrutiny or an investigation of the methodology currently used to calculate avoided cost. Again, concerns regarding this issue may be better addressed in a resolution, rather than in statute.

Thank you for the opportunity to testify on this measure.

**Testimony before**

**The House Committee on  
Energy and Environmental Protection**

**S.B. 2981 SD2 -- Relating to Renewable Energy**

**Tuesday, March 13, 2012  
9:00 am, Conference Room 325**

**By Jose Dizon  
Manager, Corporate Planning  
Hawaiian Electric Company, Inc.**

Chair Coffman, Vice-Chair Kawakami and Members of the Committee:

My name is Jose Dizon. I am the Manager of Corporate Planning for Hawaiian Electric Company. I am testifying on behalf of Hawaiian Electric Company (HECO) and its subsidiary utilities, Maui Electric Company (MECO) and Hawaii Electric Light Company (HELCO).

The HECO Companies support S.B. 2981 SD2 as written. For the Committee's information, the Public Utilities Commission has already initiated the Integrated Resource Planning process in their Order No. 30233 in Docket No. 2012-0036 dated March 2, 2012.

Thank you for the opportunity to testify.

Jeannine Johnson, Legislative Sub-Committee Chair  
**Kuli'ou'ou / Kalani Iki Neighborhood Board #2**

5648 Pia Street, Honolulu, Hawai'i 96821

Phone: 373-2874 (h) / 691-7261 (w)

March 11, 2012

COMMITTEE ON WATER, LAND, & OCEAN RESOURCES

Rep. Jerry L. Chang, Chair

Rep. Sharon E. Har, Vice Chair

COMMITTEE ON ENERGY & ENVIRONMENTAL PROTECTION

Rep. Denny Coffman, Chair

Rep. Derek S.K. Kawakami, Vice Chair

Re: SB2981 SD2 - Relating to Renewable Energy

Hrg: Monday, March 12, 2012 at 9:15 am in Conf. Room 325

Aloha mai kākou,

Under Section 2-14-125 of the Neighborhood Board Plan, I have been appointed as a Delegate with responsibilities to represent the **Kuli'ou'ou / Kalani Iki Neighborhood Board #2** on matters approved by the Board. As Committee Chair of the **Kuli'ou'ou / Kalani Iki Neighborhood Board #2** Legislative Sub-Committee, I must inform you **Neighborhood Board #2** strongly opposes SB 2981, SD2 which allows the public utilities commission to direct electric utilities to include specific scenarios in each utility's integrated resource planning action plan to help the State achieve its clean energy goals, including the utilization of firm, indigenous renewable resources and the transmission of excess firm or intermittent renewable resources via an undersea electricity transmission cable. **Neighborhood Board #2** represents over 6,000 households, with a population of almost 20,000 people (State of Hawaii Data Book 2002) in East Honolulu.

Hawai'i is a unique and beautiful state - for many, it is an ideal place to live and is second to none for providing a preferred quality of life. But we face a growing number of challenges and pressing issues that threaten our limited natural resources, rich cultural heritage, and precious way of life. The lack of affordable and adequate housing; steady deterioration of our public infrastructure - including roads, parks, schools, health care facilities and other buildings; traffic gridlock and congestion on most islands; and population growth increasing at a rapid rate, particularly on the neighbor islands - all raise questions about the long term limits of growth on these islands and the need for all of us to begin planning and acting now to ensure a positive and sustainable future for the people of Hawai'i, especially our children, youth, and future generations. Our Hawaiian islands are rich in its physical and geographic beauty, its cultural and ethnic diversity, and a Hawaiian tradition and heritage that make our state uniquely special.

On December 7, 2006, **Neighborhood Board #2** voted 12-0-1 to preserve the qualities and characteristics of Hawai'i's unique island lifestyle to every extent possible, to support

long-range planning based on sound planning principles with accountability and the Hawaiian concept of the ahupua'a system in which people respect the air, land, water, and other scarce natural resources that make life sustainable from the mountains to the sea. The proposed oceanic transmission cable will be laid in the Hawaiian Islands Humpback Whale National Marine Sanctuary, which Sanctuary regulations prohibit "altering of the seabed" and will impact the endangered Hawaiian monk seals, whales, dolphins and turtles.

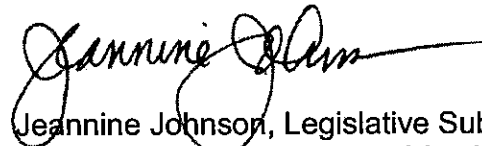
Hawai'i's ratepayers will be required to cover the projected costs of the \$1 billion undersea transmission cable through a \$3.53 - \$5.13 monthly increase in every household's electric rates. Neither the State of Hawai'i, with a current deficit that exceeds the projected cost of the undersea transmission cable, nor HECO, with a credit rating just one step above junk bond status, can afford to build the cable.

**Neighborhood Board #2** supports renewable energy alternatives to fossil fuels which are locally manufactured and would employ more Hawai'i residents including but not limited to wave energy, Ocean Thermal Energy Conversion, and new-technology solar which are all viable for Hawaii's renewable energy needs. The \$1 billion projected costs for the undersea cable alone could be invested in covering 28,500 O'ahu homes (20% of O'ahu homes) with photovoltaic systems, which would reduce O'ahu's use of oil by nearly 500,000 barrels per year, save those 28,500 homeowners more than \$48 million per year, and create an estimated 500 to 600 jobs.

Therefore, on December 1, 2011, **Neighborhood Board #2** voted 10-3-1 to oppose direct or indirect public financing of the proposed undersea cable.

Your opposition of SB 2981, SD2 is respectfully requested.

'O au iho nō me ke aloha,



Jeannine Johnson, Legislative Sub-Committee Chair  
**Kuli'ou'ou / Kalani Iki Neighborhood Board #2**



KULI'OU'OU/KALANI IKI NEIGHBORHOOD BOARD NO. 2

c/o NEIGHBORHOOD COMMISSION • 530 SOUTH KING STREET ROOM 406 • HONOLULU, HAWAII, 96813  
TEL: (808) 768-3710 • FAX: (808) 768-3711 • INTERNET: [www1.honolulu.gov/nco](http://www1.honolulu.gov/nco)

**RESOLUTION OPPOSING DIRECT OR INDIRECT PUBLIC  
FINANCING OF THE PROPOSED UNDERSEA CABLE AND THE  
CONSTRUCTION OF INDUSTRIAL WIND POWER PLANTS ON  
LĀNA'I AND MOLOKA'I THAT PROVIDE ENERGY FOR O'AHU**

1. WHEREAS, before Westerners arrived in Hawai'i, native Hawaiians lived a life of self-subsistence and harmony with the land and sea.
2. WHEREAS, Hawai'i is a unique and beautiful state - for many, it is an ideal place to live and is second to none for providing a preferred quality of life. But we face a growing number of challenges and pressing issues that threaten our limited natural resources, rich cultural heritage, and precious way of life. The lack of affordable and adequate housing; steady deterioration of our public infrastructure - including roads, parks, schools, health care facilities and other buildings; traffic gridlock and congestion on most islands; and population growth increasing at a rapid rate, particularly on the neighbor islands - all raise questions about the long term limits of growth on these islands and the need for all of us to begin planning and acting now to ensure a positive and sustainable future for the people of Hawai'i, especially our children, youth, and future generations. Our Hawaiian islands are rich in its physical and geographic beauty, its cultural and ethnic diversity, and a Hawaiian tradition and heritage that make our state uniquely special. To every extent possible, planning policies should be based on the traditional Hawaiian concept of the ahupua'a resource and behavioral management system - a system based on making sure that people respect the air, land, water, and other scarce natural resources that make life sustainable from the mountains to the sea. In its final report, the Hawai'i 2050 Sustainability Task recommended that the qualities and characteristics of Hawai'i's unique island lifestyle be preserved, perpetuated and integrated in any long-range planning and based on sound planning principles with accountability. Consequently, on December 7, 2006, the Kuli'ou'ou/Kalani Iki Neighborhood Board No. 2 voted 12-0-1 to support the Hawaiian concept of the ahupua'a system and sound planning principles with accountability.
3. WHEREAS, Hawai'i depends on fossil fuels to meet over 90% of its energy needs. Electricity accounts for 30% of that usage; the balance is primarily for transportation. The cost of oil has become increasingly volatile and unpredictable in recent years. The State of Hawai'i's goal, as stated in the Hawai'i Clean Energy Initiative, is that 70% of Hawai'i's energy needs come from renewable sources by 2030. "Big Wind" is a 2008 Lingle administration proposal widely promoted as a clean and sustainable source of energy.
4. WHEREAS, wind turbines are typically over 400 feet high (taller than the Statue of Liberty and the tallest building on O'ahu) and have a wing span of a Boeing 747. The steel tower is anchored in a base 60 feet in diameter and 10-30 feet deep of more than a thousand tons of concrete and steel rebar. The platform is critical to stabilizing the immense weight of the turbine assembly, which can weigh a total of 334 tons. Wind turbines unavoidably generate loud noises and vibrations which can be heard up to 5 miles

away, and are topped with flashing lights day and night to increase their visibility. After 20 years, most turbines will shut down, leaving rusting wind turbine towers visible for miles.

5. WHEREAS, Castle & Cooke has proposed to build a 400 MW wind power plant on Lāna'i and Moloka'i and sell all the power to Hawaiian Electric (HECO) for use solely on O'ahu. The State of Hawai'i has proposed building an undersea cable to transmit all the wind energy to O'ahu, whose current electricity consumption is approximately 1400 MW. This proposed industrial wind power plant project will place 80 to 170 wind turbines on Lana'i that will use of up to 22,000 acres (one-fourth of the island), including Ka'ā, the largest ahupua'a on the island, as well as 90 turbine towers on lands on Moloka'i that are not yet determined.

6. WHEREAS, pre-western contact Ka'ā supported many near-shore settlements and agricultural fields and its current traditional features include ceremonial sites, burials, trails, residences, agricultural features, petroglyphs, modified caves and contest fields; and modern Ka'ā supports sonic of the most unique and endangered dry-forest plants and cultural features of the Hawaiian islands.

7. WHEREAS, the proposed project will permanently alter, degrade, and possibly destroy a substantial portion of Lāna'i as well as Lāna'i's and Moloka'i's natural and cultural resources which include archeological and sacred sites, wetlands, fishing and hunting grounds, as well as wildlife and their habitats.

8. WHEREAS, the proposed oceanic power cable will be laid in the Hawaiian Islands Humpback Whale National Marine Sanctuary which Sanctuary regulations prohibit "altering of the seabed" and will impact the endangered Hawaiian monk seals, whales, dolphins and turtles.

9. WHEREAS, the cost for these multi-billion dollar industrial wind power plants proposed on Lāna'i and Moloka'i for O'ahu will be borne by taxpayers since 65% of development costs come from taxes. Hawai'i's ratepayers will be required to cover the full costs of the \$1 billion undersea cable through a \$3.53 -\$5.13 monthly increase in every household's electric rates. Neither the State of Hawai'i, with a current deficit that exceeds the projected cost of the undersea cable, nor HECO, with a credit rating just one step above junk bond status, can afford to build the cable.

10. WHEREAS, the \$1 billion projected costs for the undersea cable alone could be invested in covering 28,500 O'ahu homes (20% of O'ahu homes) with photovoltaic systems, which would reduce O'ahu's use of oil by nearly 500,000 barrels per year, save those 28,500 homeowners more than \$48 million per year, and create an estimated 500 to 600 jobs.

**KULI'OU'OU / KALANI IKI NEIGHBORHOOD BOARD NO. 2**  
**REGULAR MEETING**  
**THURSDAY, DECEMBER 1, 2011**  
**'AINA HAINA PUBLIC LIBRARY**  
**5246 KALANIANA'OLE HIGHWAY**  
**PAGE 3**

11. WHEREAS, while wind power is an intermittent alternative energy source to fossil fuels, there are many other forms of renewable energy which are locally manufactured and thus employ more Hawai'i residents. These alternatives include wave energy, Ocean Thermal Energy Conversion, and new-technology solar and are all viable for Hawaii's renewable energy needs.

NOW, THEREFORE, BE IT RESOLVED, that the Kuli'ou'ou/Kalani Iki Neighborhood Board No. 2 opposes direct or indirect public financing of the proposed undersea cable and the construction of industrial wind power plants on Lāna'i and Moloka'i that provide energy for O'ahu.

This resolution was adopted by the Kuli'ou'ou/Kalani Iki Neighborhood Board No. 2, 10-3-1, at its Thursday, December 1, 2011 regular monthly meeting.

Submitted by: Robert T. Chuck, Chair





Date: Tuesday, March 13, 2012  
Time: 9:00 am  
Place: Conference Room 325  
Committees: Senate – EEP

Re: SB 2981 SD2 – Relating to Renewable Energy

Aloha Representatives,

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

The IDG strongly supports this measure.

Hawaii is the most energy insecure State in the Union. Hawaii is currently experiencing a crisis in energy as well as a fiscal crisis. This is due largely to the fact that Hawaii exports \$7 billion a year for fossil fuel. These revenues are not being made available for growth and expansion of our economy because they are diverted to pay for fossil fuel despite the fact that Hawaii has a great bounty of indigenous renewable energy, including geothermal energy that is a 'mineral' and an asset of the public trust. The State and its agencies & regulatory bodies, including the PUC, have a trust & fiduciary obligation to inventory & develop these renewable assets in a way that benefits the public and Native Hawaiians who are the beneficiaries of the public trust.

One of the primary barriers to Hawaii's energy self-sufficiency is the conflict of interest that exists because the electric utility that owns & manages the grid is also in the business of energy generation using fossil fuels and facilities that can only be run on fossil fuels of their own bio-fuel plants. These facilities cannot interface with geothermal or other renewable energy sources.

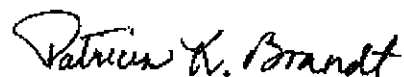
This measure addresses this conflict and empowers the PUC in the performance of its Trust obligations to ensure that the States energy trust assets are developed as a priority for Hawaii's energy security, and that they are developed in a manner that brings a direct benefit to the public and Native Hawaiians who are the sole beneficiaries of the State public trust.

Provisions (1) and (4) make reference to “existing “and” new geothermal subzones”, it is recommended that references to subzones be deleted from the Bill and that new language be added that states:

- (1) Developing facilities that generate electricity using geothermal steam from public trust lands to replace or mitigate the use of fossil fuel-based electricity generation facilities;
- (4) Coordinating efforts with the State Energy Coordinator, the Board of Land and Natural Resources, the University of Hawaii to identify new areas for development; provided that the State land shall be given priority over private land for development;

These changes allow the process to proceed without the State being required to pay for costs and accommodate lengthy delays (required by geothermal subzone designation process,) and expedite development of public trust renewables as a priority.

Kind Regards,

A handwritten signature in black ink that reads "Patricia K. Brandt". The signature is written in a cursive, flowing style.

Patricia K. Brandt  
CEO, IDG



## **Indigenous Consultants, LLC**

**Mililani B. Trask, Principal**

P.O.Box 6377 ❖ Hilo, HI 96720

[Mililani.trask@gmail.com](mailto:Mililani.trask@gmail.com)



Date: Tuesday, March 13, 2012

Time: 9:00 am

Place: Conference Room 325

Committees: Senate – EEP

Re: SB 2981 SD2 - Relating to Renewable Energy

Aloha Representatives,

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

### **Testimony in Strong Support**

Hawaii is the most energy insecure State in the Union. Hawaii is currently experiencing a crisis in energy as well as a fiscal crisis. This is due largely to the fact that Hawaii exports \$7 billion a year for fossil fuel. These revenues are not being made available for growth and expansion of our economy because they are diverted to pay for fossil fuel despite the fact that Hawaii has a great bounty of indigenous renewable energy, including geothermal energy that is a 'mineral' and an asset of the public trust. The State and its agencies & regulatory bodies, including the PUC, have a trust & fiduciary obligation to inventory & develop these renewable assets in a way that benefits the public and Native Hawaiians who are the beneficiaries of the public trust.

One of the primary barriers to Hawaii's energy self-sufficiency is the conflict of interest that exists because the electric utility that owns & manages the grid is also in the business of energy generation using fossil fuels and facilities that can only be run on

fossil fuels of their own bio-fuel plants. These facilities cannot interface with geothermal of other renewable energy sources.

This measure addresses this conflict and empowers the PUC in the performance of its Trust obligations to ensure that the States energy trust assets are developed as a priority for Hawaii's energy security, and that they are developed in a manner that brings a direct benefit to the public and Native Hawaiians who are the sole beneficiaries of the State public trust.

Provisions (1) and (4) make reference to "existing "and" new geothermal subzones", it is recommended that references to subzones be deleted from the Bill and that new language be added that states:

- (1) Developing facilities that generate electricity using geothermal steam from public trust lands to replace or mitigate the use of fossil fuel-based electricity generation facilities;
- (4) Coordinating efforts with the State Energy Coordinator, the Board of Land and Natural Resources, the University of Hawaii to identify new areas for development; provided that the State land shall be given priority over private land for development;

These changes allow the process to proceed without the State being required to pay for costs and accommodate lengthy delays (required by geothermal subzone designation process,) and expedite development of public trust renewables as a priority.

Regards,



Mililani B. Trask – Indigenous Consultants LLC



# Sierra Club Hawai'i Chapter

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## HOUSE COMMITTEE ON ENERGY & ENVIRONMENTAL PROTECTION

March 13, 2012, 9:00 A.M.  
(*Testimony is 1 page long*)

### TESTIMONY IN SUPPORT OF THE INTENT OF SB 2981 (SD2) WITH PROPOSED AMENDMENTS

Aloha Chair Coffman and Committee Members -

The Sierra Club, Hawai'i Chapter, with over 10,000 members and supporters, *supports* the intent of SB 2981 (SD2). This measure would require electric utilities to emphasize specific renewable energy forms of energy when crafting an integrated resource plan.

A concern with this bill is that it specifies winners and losers in the renewable energy field. By specifically naming certain types of "renewable" energy, like waste-to-energy, this bill could limit consideration of other, and perhaps better, renewable energy forms. In such an evolving field, it may be wiser to leave the specifics of the types of renewable energy up to the PUC.

#### *Proposed Amendment:*

Section 2 should simply state:

The public utilities commission shall direct public utilities that provide electricity to the public to include in their integrated resource plans the replacement of firm power fossil fuel-based electricity generation facilities with indigenous firm power facilities that use renewable sources to generate electricity.

Thank you for the opportunity to testify.