

SB 2407

WRITTEN ONLY

TESTIMONY OF CARLITO P. CALIBOSO
CHAIRMAN, PUBLIC UTILITIES COMMISSION
DEPARTMENT OF BUDGET AND FINANCE
STATE OF HAWAII
TO THE
SENATE COMMITTEE ON ENERGY AND ENVIRONMENT
FEBRUARY 4, 2010

MEASURE: S.B. No. 2407
TITLE: Relating to Renewable Energy

Chair Gabbard and Members of the Committee:

DESCRIPTION:

This bill would provide a credit to Lanai and Molokai electricity users if the islands export electricity for consumption on another island.

POSITION:

The Public Utilities Commission ("Commission") takes no position on the bill at this time and defers to the legislature on the policy objectives of this bill, and provides the following comments.

COMMENTS:

- The Commission understands the desire to provide some compensation to residents of an island that may host a large energy project that exports most of the energy to another island is an issue that needs to be addressed if such exports are to take place. This would involve the subsidization of the electricity rates on such islands by other customers located on other islands, which is an appropriate policy issue for the legislature to decide.
- The Commission may have further and more detailed suggestions as this bill progresses in this legislative session

Thank you for the opportunity to testify.



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COMMITTEE ON ENERGY AND ENVIRONMENT

Senator Mike Gabbard, Chair

Senator J. Kalani English, Vice Chair

DATE: Thursday, February 4, 2010

TIME: 3:00 p.m.

PLACE: Conference Room 225

SB 2407 RELATING TO RENEWABLE ENERGY.

COMMENTS

Aloha Chair Gabbard, Vice Chair English and Members of the Committees

Description: SB 2407 establishes an electricity bill reduction for residential electric meters on islands where renewable electric energy is located.

Life of the Land is Hawai'i's own energy, environmental and community action group advocating for the people and `aina for four decades. Our mission is to preserve and protect the life of the land through sound energy and land use policies and to promote open government through research, education, advocacy and, when necessary, litigation.

Life of the Land's Analysis:

SB 2407 establishes a import/export ratio whereby residents of islands exporting electricity would see their bills decrease, while residents of islands importing electricity would have an almost zero net impact on their electric bills.

A Megawatt is a unit of capacity, while a megawatt-hour is a unit of consumption.

So our calculation is a back of the envelope very rough estimate.

Suppose a 200MW windfarm is built on Lanai and the power is then exported to Oahu.

Windfarms have about 40% efficiency and therefore the 200MW of wind is equivalent to about 80MW of firm power (200x0.4).

Oahu's load varies from around 600-1200MW depending upon the season, day and time of day. The average load might be 900 MW.

Thus Oahu's import of Lanai wind power divided by Oahu's total use would be very roughly 80/900 or 9%.

During March 2009 the Lanai electric rate was \$0.31/kWh. A 9% reduction would be \$0.28/kilowatt-hour.

Oahu (0.9M) has a population about 250x that of Lanai (3-4,000). Assuming the same proportion of meters, the average resident of Oahu would experience a rise of a hundredth of a cent per kilowatt hour. Assuming Oahu residential ratepayers consume 600kWh per month, this would mean an increase of 72 cents/year.

Oahu residents would face a much larger impact. HECO has about \$1.2B in long-term debt, the price of the undersea cable will be \$0.8-1B and the numerous land-based transmission lines needed to integrate the undersea cable with the electric grids will cost a minimum of \$0.3B. If HECO financed the water and land based transmission lines then their debt would be at least doubled. HECO ratepayers would pay for this "improvement."

Picture an alternative. Lanai has centralized and distributed solar and wind systems with some biomass and electric vehicles and is able to become the first Hawaii Island that is divorced from fossil fuel. Lanai residents get to keep their money instead of exporting to unstable foreign regions to acquire fuel for vehicles and generators. Energy tourists visit Lanai, pumping money into the local economy, to see how energy independence was achieved.

Mahalo,

Henry Curtis
Executive Director