

WRITTEN ONLY

TESTIMONY BY GEORGINA K. KAWAMURA
DIRECTOR, DEPARTMENT OF BUDGET AND FINANCE
STATE OF HAWAII
TO THE HOUSE COMMITTEE ON CONSUMER PROTECTION AND COMMERCE
ON
HOUSE BILL NO. 2965, H.D. 1

February 11, 2008

RELATING TO AGRICULTURAL WATER SECURITY

House Bill No. 2965, H.D. 1, proposes to ensure the security of the water supply and irrigation systems for agriculture in the State by creating the Agricultural Water Security Revolving Fund to be funded by legislative appropriations.

As a matter of general policy, this department does not support the creation of any special or revolving fund which does not meet the requirements of Section 37-52.4 of the Hawaii Revised Statutes. Special or revolving funds should: 1) reflect a clear nexus between the benefits sought and charges made upon the users or beneficiaries of the program; 2) provide an appropriate means of financing for the program or activity; and 3) demonstrate the capacity to be financially self-sustaining. It is difficult to determine whether the proposed funds meet any of the above criteria.

In addition, House Bill No. 2965, H.D. 1, does not designate an appropriate program for expenditure. As such, it is difficult to determine whether the revolving fund supports the objectives of a State program.



STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT
P.O. BOX 621
HONOLULU, HAWAII 96809

**TESTIMONY OF THE CHAIRPERSON
OF THE COMMISSION ON WATER RESOURCE MANAGEMENT
DEPARTMENT OF LAND AND NATURAL RESOURCES**

on House Bill 2965, House Draft 1 – Relating To Agricultural Water Security

**BEFORE THE HOUSE COMMITTEE ON
CONSUMER PROTECTION AND COMMERCE**

February 11, 2008

The purpose of House Bill 2965, House Draft 1 is to ensure and enhance the security of the water supply for agriculture in the State. The Department of Land and Natural Resources (Department) is providing comments (excepting SECTION 2) on this measure which establishes an agricultural water security revolving fund, and defers comments to the Department of Agriculture (DOA) on SECTION 2 of this measure. The Department supports the intent of this measure as the Department recognizes the need for food and agricultural security in the State. The Department would like to share information on other existing programs in place that address the intent of this measure and offers the following comments.

1. The purpose of this measure as stated is for agricultural water security. SECTION 3 of this measure allows the proposed special funds to be used for the maintenance and upgrade of agricultural water sources, appurtenances, and irrigation systems, administrative costs, surveys, studies, and plans, as well as other water security projects. These activities seem to be directed toward the goal of providing a reliable supply of water rather than securing the water supply from some unidentified threat.
2. The Department notes that in 2006, the Legislature promulgated §167-24, Hawaii Revised Statutes, which established an irrigation repair and maintenance special fund within the department of agriculture. This statute allows for the repair and maintenance of privately-owned irrigation systems provided that the land owner contribute one to one matching funds, file a petition designating a majority of all land served by the water produced by the irrigation system as important agricultural lands, and agrees to use all lands owned or controlled by the landowner and served by the irrigation system for agricultural production.
3. The Department acknowledges the negative impacts of drought to agricultural water sources and irrigation systems, as well as to other impacted sectors, such as water supply and environmental, public health and safety (wildland fire). The state drought coordinator works with the county drought committees to identify drought mitigation projects in their respective counties for all impacted sectors, including the agriculture and

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commerce sector. Project implementation has begun with the release of funding appropriated under Act 238, Session Laws of Hawaii 2007.

4. The Department also notes that the 2004 update of the Agricultural Water Use and Development Plan (AWUDP), being maintained by DOA, evaluated 13 irrigation systems, including privately owned systems. The report includes existing conditions, assessment of needs, proposed capital and maintenance improvements, estimated costs, and a five-year implementation schedule for each of the studied systems. An update of AWUDP is currently in progress that further examines irrigation systems' needs.
5. The Department also notes that two measures were introduced in this current legislative session – House Bill 2593 and Senate Bill 2645, both relating to drought mitigation and appropriation for drought mitigation projects. These companion bills address problems of drought impacts to agricultural water reliability. The Department testified in support of the intent of these two bills.
6. In addition to the above existing and proposed funding sources and mechanisms, the Department of Defense, Civil Defense Division, coordinates the State Hazard Mitigation Forum (SHMF) for the purpose of minimizing risks of hazards, both natural and man-made. SHMF has worked with stakeholders statewide to develop the State and County Multi-Hazard Mitigation Plans. These plans include hazard risk assessments along with strategies to mitigate these risks, and are required to qualify for certain Federal Emergency Management Agency hazard mitigation funding. Threats to water systems could be addressed in these plans, which are updated periodically.
7. The Department is also concerned about the implications this measure would have on state appropriations for public purposes. This measure specifically targets water sources, appurtenances, and irrigation systems not owned by either DOA or the Agribusiness Development Corporation. Besides those owned by federal, state, or county governments, all other water sources, appurtenances, and systems are privately owned.
8. Finally, the Department has concerns that any funding appropriated for the Agricultural Water Security Revolving Fund will impact priorities in the Executive Supplemental Budget.

House Bill 2965, House Draft 1 does not define what is meant by agricultural water security. If the purpose of this measure is to ensure a reliable supply of agricultural water, there are other existing programs in place to achieve this result, as well as other proposed new measures.

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KAMEHAMEHA SCHOOLS

February 11, 2008

The Honorable Robert N. Herkes, Chair and Members
Committee on Consumer Protection & Commerce
Hawaii State Capitol
415 South Beretania Street, Room 325
Honolulu, Hawaii 96813

Hearing Date: Monday, February 11, 2008
2:05 p.m., Conference Room 325

Dear Representative Herkes and Committee Members:

Subject: Support for HB 2965 HD1, Relating to Agricultural Water Security

As the Kamehameha Schools' (KS) representative to Kohala and Hamakua, I have seen firsthand the serious effects of the October 15, 2006 Kiholo Earthquake on the agricultural community and infrastructure of those regions. As private and public entities and individuals have united to repair the important water systems of these regions, numerous lessons have been learned and weaknesses exposed. The lack of back-up water sources and of energy sources necessary to effectively utilize these sources is at the top of the list.

In Kohala the community was lucky to have a few wells that could be used to keep some farmers alive. However, as repairs to the Kohala Ditch drag on, funding for fuel to continue pumping water is about to run out. It is a travesty that the Hawi wind farm turbines sit idle only a few pastures away. In Hamakua, they are not so lucky in back-up well sources and that is an item being pursued for the future. When these back-ups sources are developed, having affordable energy in emergency situations will be essential. Underutilized firm power in Hamakua could easily satisfy that need.

HB 2965 HD1 takes an important step towards providing critical emergency "insurance" for Hawaii's remaining agricultural lands and rural communities. In true periods of emergency, which should be clarified in this bill, a mechanism needs to exist for energy firms to assist in a fashion which is economically feasible for these firms and the agricultural community. Let us learn from the 2006 Kiholo Earthquake and provide for reliable, robust water and energy systems that will weather future disasters. It is not a question of if, but when.

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

Kaero Duarte
Water Resources Manager
Kamehameha Schools

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**TESTIMONY OF CARLITO P. CALIBOSO
CHAIRMAN, PUBLIC UTILITIES COMMISSION
DEPARTMENT OF BUDGET AND FINANCE
STATE OF HAWAII
TO THE
HOUSE COMMITTEE ON
CONSUMER PROTECTION AND COMMERCE
FEBRUARY 11, 2008**

MEASURE: H.B. No. 2965, H.D. 1

TITLE: Relating to Agricultural Water Security.

Chair Herkes and Members of the Committee:

DESCRIPTION:

This bill is intended to preserve the security of the State's agricultural water supply. It proposes, among other things, to require that any excess power produced by independent power producers and private cogeneration facilities be provided to irrigation systems at rates that are "at or below existing avoided cost contract power purchase agreements." Also, the bill would require electric power, to the fullest extent possible, be diverted directly to agricultural pumping facilities in the event of an emergency.

POSITION:

The Public Utilities Commission ("Commission") respectfully submits the following comments and recommendations on Section 2 of the bill as written.

COMMENTS:

- **By requiring that excess electrical power produced by independent power producers and private cogeneration facilities be diverted to public and private agricultural water systems, Section 2 of the bill appears to require the implementation of "wheeling," a complex arrangement that the Commission is currently examining on a more narrowly focused scale than that envisioned by this bill.**
 - "Wheeling" is generally defined as the process of transmitting electrical power from a seller's point of generation across a third-party owned transmission and distribution system to the seller's retail customer.

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- A specific type of wheeling, intra-governmental wheeling, is the subject of an ongoing investigation opened by the Commission in June 2007. Specifically, the purpose of the docket is to investigate the feasibility of implementing intra-governmental wheeling of electricity in Hawaii. Among the complex issues to be addressed in the docket are:
 1. Identifying what impact, if any, intra-governmental wheeling will have on Hawaii's electric industry;
 2. Addressing interconnection matters;
 3. Identifying the costs to utilities of implementing intra-governmental wheeling;
 4. Identifying any rate design and cost allocation issues associated with intra-governmental wheeling;
 5. Considering the financial cost and impact of intra-governmental wheeling on non-wheeling customers of a utility;
 6. Identifying any power back-up issues; and
 7. Addressing how rates for intra-governmental rates would be set.
- Given the Commission's ongoing investigation on intra-governmental wheeling, it would be inappropriate for the Commission to opine on the advisability of diverting excess electrical power to public and private agricultural water systems in the manner and at rates described in the bill.
- The proposed bill, however, does not address any involvement of and compensation to the electric utility for transmission of the electric power between the power producer and the agricultural water system.
- **In the proposed subsection (b) of Section 2, the bill states, "In the event of an emergency declared by the governor, electric power, to the fullest extent possible, shall be diverted to agricultural pumping facilities..."**
 - The Commission is concerned with the sweeping and overbroad effect and consequences of this language. This bill appears to require that agricultural pumping facilities receive the **highest priority**, in terms of electricity service, above all other users, including essential and critical services, such as police, fire, hospitals, airports, wastewater treatment plants, the military and others.

Thank you for the opportunity to testify.

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Testimony before the House Committee on
Consumer Protection and Commerce

HB 2965 - Relating to Agricultural Water Security

February 11, 2008
2:05 p.m., Conference Room 325

By William A. Bonnet
Vice President
Government & Community Affairs
Hawaiian Electric Company, Inc.

Chair Herkes, Vice Chair McKelvey and members of the Committee:

My name is Bill Bonnet and I am testifying on behalf of Hawaiian Electric Company, Inc., and its subsidiary utilities, Maui Electric Company, Ltd., and Hawaii Electric Light Company, Inc.

Hawaiian Electric Company has concerns with Section 2 of the proposed bill, which proposes to make non-utility electric power available to agricultural users under emergency conditions or where such power is available in excess of a utility contract with the provider. There are several potential problems related to this proposal:

1. Emergency conditions declared by the Governor could result from any one of a number of natural disasters, terrorist activity, a critical resource shortage, or labor disputes affecting key areas of the economy. These may be localized in nature or affect the entire state. The health and safety of our citizens, however, must be given priority in emergency situations. To assign electricity preferentially to agriculture under all such conditions is to constrain State Civil Defense and the Energy Council in exercising their judgment according to facts and circumstances at the time of that emergency. We do not believe such a constraint is necessary or appropriate.

2. The presumption under subparagraph (a) of Section 2 is that excess power can be delivered to agricultural users through the utility transmission and distribution system at no cost to either the supplier or the consumer of power. There is a cost to operating and maintaining these facilities, and a cost to

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expanding their capacity to accommodate additional load, whether that need be immediate or an acceleration of a future expansion need. Such costs will be borne by all utility ratepayers. We do not believe this is appropriate for the purpose identified in this bill.

3. Finally, if a producer of power supplies more than one customer, that producer is deemed a "public utility" under the laws of the State of Hawaii and is subject to regulation by the Public Utilities Commission. Any such producer would have to think long and hard about whether that's worth the price of providing excess power periodically to agricultural users.

Thank you for the opportunity to present this testimony.

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COMMITTEE ON CONSUMER PROTECTION & COMMERCE

Rep. Robert N. Herkes, Chair

Rep. Angus L.K. McKelvey, Vice Chair

Monday February 11, 2008

Conference Room 325

2:05 PM

5 copies requested

Testimony in Support of HB2965

RELATING TO AGRICULTURAL WATER SECURITY.

Submitted by:

Donald Thomas

Hawaii is critically dependent on outside sources of foodstuffs with more than 90% of our food being imported from offshore. The barriers to our becoming more nearly self-sufficient in our food supply are many and varied, but it's clear that the availability and the cost of providing water to the agricultural community are among the most critical issues this industry faces. As our population has increased, the demand for our limited groundwater resources has likewise increased and we are approaching a point where it will be impossible for our agricultural industry to survive.

If Hawaii intends to sustain its agriculture industry, and see it expand to supply a significant portion of our food requirements, we need to better manage the critical infrastructure that supports it and we need to look for opportunities to make this infrastructure more cost effective. With the rising cost of energy, the viability of the ag industry becomes progressively more challenging. House Bill 2965 is a well-considered first step toward moderating the energy costs, and stimulating an innovative approach toward supporting the industry in a sustainable manner. State support I would also like to urge your committees to consider implementation of a proactive effort, involving a collaboration among the ag/ranching community, our power production industry, and the Water Commission, be undertaken for a comprehensive, state-wide assessment of ground/surface water availability, the viability of innovative power production technologies, and the administrative and regulatory measures that need to be taken to ensure that reliable and affordable water will be available to sustain our agriculture community on a sustained basis.

Thank you for this opportunity to offer testimony.

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Island Resources Ltd.

"Resource management with imagination"

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February 8, 2008

**RE: House Bill 2965, Relating to Agricultural Water Security
House Conference Room 325 – February 11, 2008; 2:05 p.m.**

Dear Representative Herkes and Members of the Committee on Consumer Protection and Commerce:

A major drawback to Hawaii's agricultural production is adequate and inexpensive water for irrigation. Our present system lacks the cohesiveness in water supply of our former major agribusiness – sugar.

We have abundant water resources and no way to pump the water for agriculture inexpensively as sugar did using biomass (bagasse). Today we must buy our power from the electric monopolies at retail prices while Independent Power Producers (IPP's) have surplus generating capacity lying idle. Wind farms, geothermal wells, solar power, wave energy, hydroelectric and other sources of power are or will be available but remain idle much of the time. They can be made more efficient and more valuable.

The recent Kiholo earthquake caused many agricultural gravity ditch systems to fail at a critical time in our agricultural future. Expensive pumping of wells using fossil fuels is the only way we could survive. All this while nearby IPP generating power plants were idle. A recent example: Last year, the output of Maui's Kahawa wind farm exceeded 125,000 megawatt hours, more than its contractual obligations to Maui Electric Company. Yet the surplus power does nothing for agriculture. This is wrong.

HIB 2965 begins to address this issue. Without a sure, secure and adequate low cost water supply, Hawaii's agriculture is neither sustainable nor competitive. According to USDA statistics, California pays an average of \$79/acre/year for irrigation water. In Hawaii the average cost is \$175/acre. We are neither affordable nor competitive. We cannot have Important Ag. Lands, nor can we have sustainable agriculture without addressing this fundamental. Buying subsidized water from operating potable water utilities is wrong and diverts attention from the real farming needs of the future.

When this bill was heard by the House Agriculture Committee, it became clear that the state's tight fiscal situation precludes the establishment of a revolving fund as proposed in section 3. Accordingly, I recommend that you delete this section entirely, adopt a "Draft 2" bill without any appropriations, and pass the bill on the merits to allow independent power producers to sell affordable surplus power to farmers, ranchers, and agricultural producers.

I urge you to pass House Bill 2965 quickly. This would allow renewable IPP's to divert uncommitted power directly to the support of sustainable agriculture at costs equal to or less than the avoided cost values of power sold to the electric monopolies.

Mahalo,



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February 11, 2008

**RE: House Bill 2965, H.D. 1, Relating to Agricultural Water Security
House Conference Room 325, February 11, 2008 – 2:05 p.m.**

Dear Chairman Herkes and Committee Members:

The subject before your committee today is irrigation and energy. At Kahua Ranch, we developed a 'village power system.' We employ windmills, solar, pumped hydro and a demonstration hydrogen project. We need a symphony of energy sources. All the parts need to work together, and it is essential that locally produced power supports irrigation for agriculture.

The benefits of irrigation are many. Irrigation increases crop yields. Globally, the 17% of land in agriculture that is irrigated produces 40% of the food. The production value of irrigated cropland worldwide is \$625 per hectare per year. Compare that to rain-fed cropland (\$95/hectare/year) or rangelands (\$17.50/hectare/year).

Irrigation allows for improved timing and spatial distribution of water. It enables reliable production and supply of vegetables and fruits, our most nutritious foods. For the rancher, irrigation enriches pastureland for fattening cattle. Irrigation increases food security, employment and farm income, and high productivity. Intensive agriculture grows the most food on the least amount of land. Worldwide, agricultural irrigation slows the expansion of deforestation.

Periodically, the U.S. Department of Agriculture surveys the costs of irrigation to American farmers and ranchers. In 2003, the USDA survey computed the costs of irrigation water by source and category. Energy costs in 2003 averaged \$40 per acre nation-wide. Costs ranged from \$7 per acre in Maryland to \$79 per acre in California, \$92 in Arizona, and over \$175 per acre in Hawaii – the highest cost in the nation. Hawaii's high costs were most related to energy expenses for pumping ground water.

The cost of irrigation is inseparable from the cost of energy. We know this intuitively; the cost of water is not just its source, but the cost of getting water on the land. The cost of water is tied to the price of electricity.

HB2965 provides a key answer to this critical cost for agriculture in Hawaii. By allowing independent power producers to sell surplus power – output in excess of contractual obligations to Hawaiian Electric Industries and its neighbor island subsidiaries – we can lower irrigation costs for our farmers.

This simple solution requires no government subsidy. It is merely sensible resource allocation and management. Independent power producers – many of whom produce electricity through renewable resources – will profit by new revenue. Farmers and ranchers will profit by virtue of lowered costs.

Today, we hear a lot about the themes of energy security and food security. State Senator Russell Kokubun rightly decries our "cargo culture." Overall, our energy supply remains dependent on foreign oil. Our supermarkets are flooded with food shipped from the mainland. We want to be

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more secure in our energy and food supply. But food and energy are vitally linked to water supply and the energy costs associated with the transmission of water.

HB2965 addresses this critical need for water security. It begins with coupling agriculture to affordable energy.

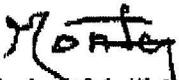
Due to concerns reported in the Standing Committee Report of the House Agriculture Committee and the state's tight budget, I urge you to adopt a new House Draft 2 and delete Section 3 of this bill. This section provides an appropriation for our water storage infrastructure – our reservoirs and dams. It is needed, but perhaps can be addressed in other bills.

Last year, farmers on the Big Island learned a tough lesson about irrigation and energy. After the Kiholo earthquake shut down the Kohala Ditch, we paid dearly for pumps, generators and diesel fuel to keep water on the land. Nearby independent power producers could have helped. In Hawi, we have the Hawi Wind Farm, producing 10.5MW. In Honokaa, the Hamakua Energy Partners facility generates 60MW. Both producers could aid immeasurably in the costs of pumping water for farmers and ranchers in Kohala and Hamakua. With passage of HB2965, they can do so.

Sustainability begins with a plan. When we keep water on the land, we make the land productive. To keep water on the land, we need affordable energy. With affordable energy and water on the land, we keep our people on land.

Thank you for your consideration of HB2965, as amended, for agricultural water security in Hawaii.

Aloha,


Herbert M. "Monty" Richards

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