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TESTIMONY OF THE HAWAII SOLAR ENERGY ASSOCIATON
IN REGARD TO H.B. 2552
RELATING TO RENEWABLE ENERGY
BEFORE THE
HOUSE COMMITTEE ON ENERGY & ENVIRONMENTAL PROTECTION
ON
TUESDAY, FEBRUARY 5, 2008

Chair Morita, Vice-Chair Carroll, my name is Richard Reed and I represent the Hawaii Solar Energy Assn. (HSEA). HSEA supports the passage of H.B. 2507.

H.B. 2552 requires DBEDT to develop a model ordinance for renewable energy projects to facilitate county planning. The bill also provides funding for what appears to be a one year project. It is unclear whether or not current DBEDT staff presently has the time or specific competence to draft the model ordinance.

In recent memory the DBEDT Energy Division has been under funded relative to the many tasks they have been asked to administer. H.B.2505 appropriates funds to hire a renewable energy projects coordinator. H.B. 2507 can be seen as the second piece to the puzzle by brining some rationality to the various country permitting processes relative to renewable energy installations. In the future, we would hope that facilitator also will be granted the necessary third puzzle piece: the **authority** to simplify and accelerate the permit process per se.

Per our previous testimony on H.B. 2505, we believe that DBEDT's Energy Division is at a crossroads. It must rebuild and reconstitute itself very quickly. The federal funds that have employed the majority of positions in the Division for approximately twenty-eight years will be depleted in four years at the current burn rate.

DBEDT must retain a permanent in-house competence relative to the many institutional and regulatory barriers (codes, ordinances, turf) that impede the rapid deployment of both large and small-scale renewable energy technologies.

Thank you for the opportunity to testify.

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TESTIMONY OF WARREN BOLLMEIER ON BEHALF OF THE HAWAII RENEWABLE ENERGY ALLIANCE BEFORE THE HOUSE COMMITTEE ON ENERGY AND ENVIRONMENTAL PROTECTION

HB 2552, RELATING TO RENEWABLE ENERGY

February 5, 2008

Chair Morita, Vice-Chair Carroll and members of the Committee I am Warren Bollmeier, testifying on behalf of the Hawaii Renewable Energy Alliance (HREA). HREA is a nonprofit corporation in Hawaii, established in 1995 by a group of individuals and organizations concerned about the energy future of Hawaii. HREA's mission is to support, through education and advocacy, the use of renewables for a sustainable, energy-efficient, environmentally-friendly, economically-sound future for Hawaii. One of HREA's goals is to support appropriate policy changes in state and local government, the Public Utilities Commission and the electric utilities to encourage increased use of renewables in Hawaii.

The purpose of HB 2552 is to require the department of business, economic development, and tourism to develop a model ordinance for renewable energy projects for adoption by the counties. Appropriates funds to develop the model. HREA supports the intent of this bill with the following proposed revisions:

1. As Proposed -- A Noble But Challenging Endeavor:
   a. It will be difficult, if not impossible, to develop a "one-size fits all," model ordinance for all the technologies referenced ("wind, solar, wave, biomass, geothermal, hydro or ocean");
   b. Model zoning ordinances are generally applicable to smaller projects, e.g., residential and small-commercial, and, in our opinion, not applicable to utility-scale projects (projects designed specifically to export power to the grid); and
2. Proposed Revisions. Given the above, HREA recommends that the bill be revised to focus on the non-utility scale projects (wind, solar, biomass and hydro) with the following two break-outs:
   a. Residential (up to 10 kW). Most of these systems would be net-metered and subject to other requirements that would vary by technology. We have attached a sample model zoning ordinance for small wind systems;
   b. Small-Commercial (10 to up to 100 kW). Again, the require-ments would likely vary by technology. However, in the case of wind, the attached sample model zoning ordinance would be a good starting point for wind.
3. Need for DBEDT Action? We recommend the attached sample model zoning ordinance be adopted by the committee for small, residential wind systems, and used as a template for small-commercial wind systems. We recommend further discussion as to whether this model ordinance for wind could be readily used as a template for solar, biomass and hydro residential and small-commercial systems.

Thank you for this opportunity to testify.

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PROPOSED MODEL ZONING ORDINANCE

ORDINANCE NUMBER _____

AN ORDINANCE FOR THE USE OF SMALL "RESIDENTIAL WIND ENERGY CONVERSION SYSTEMS", IN ITS ENTIRETY

Section 1 Intent:

With the ever increasing cost of electricity, the need to create a balance for clean renewable energy resources and recognizing the necessity to protect the public health, safety and welfare of the community with cleaner air, the {city/state} finds these regulations are necessary to ensure that residential wind energy conversion systems are appropriately designed, sited and installed.

This ordinance establishes the regulations and criteria which allow compatible accessory uses to be located within the various land use districts. Unless otherwise provided, all accessory uses are subject to the same regulations as the sponsoring primary use.

Section 2 Definitions:

Residential Wind Energy System: A wind energy conversion system consisting of a wind generator, tower, and associated control or conversion electronics, which has a rated capacity of not more that 10 kW and which is intended to primarily reduce on-site consumption of utility power. A system is considered a residential wind energy system if it supplies electrical power solely for on site use, except that when a parcel on which the system is installed also receives electrical power supplied by a utility company, excess electrical power generated and not presently needed for on site use may be used by the utility company.

Tower: The vertical component of a wind energy conversion system that elevates the wind generator and attached blades above the ground.

Section 3 Regulations:

Residential wind energy systems shall be a permitted use in all zoning classifications where structures of any sort are allowed; subject to certain requirements as set forth below:

Tower height: For property sizes up to 2.5 acres, the tower height shall be limited to 70 feet and/or 20 feet above tree line within a 500-foot radius of the proposed installation. For property sizes of 2.5 acres or more, the tower height is restricted to 100' except as imposed by FAA regulations.

Clearance of Blade: No portion of the residential wind energy system shall extend within 30 feet of the ground. No portion of a residential wind energy system blade shall extend within 20 feet of the ground. No blades may extend over parking areas, driveways or sidewalks.

Set-back: No part of the wind system structure, including guy wire anchors, may extend closer than ten feet to the property boundaries of the installation site. Set backs for the system tower

shall be no farther from the property line than the height of the system, provided that it also complies with any applicable fire setback requirements.

Automatic Over-speed Controls: All wind energy conversion systems shall be equipped with manual and automatic (mechanical or electrical) over-speed controls to limit the blade rotation speed to within the design limits of the residential wind energy system.

Sound: Residential wind energy systems shall not exceed 60 dBA, as measured at the closest neighboring inhabited dwelling. The sound level, however, may be exceeded during short-term events such as severe windstorms. Sound measurement data must be submitted from the manufacturer prior to approval of permit.

Compliance with Uniform Building Code: Building permit applications for residential wind systems shall be accompanied by standard drawings of the wind turbine structure, including the tower, base and footings. An engineering analysis of the tower showing compliance with the Uniform Building Code or International Building Code and certified by a licensed professional engineer shall also be submitted. This analysis is frequently supplied by the manufacturer. Wet stamps shall not be required.

Compliance with FAA Regulations: Residential wind energy systems must comply with applicable FAA regulations, including any necessary approvals for installations close to airports.

Compliance with National Electric Code: Building permit applications for residential wind energy systems shall be accompanied by a line drawing of the electrical components in sufficient detail to allow for a determination that the manner of the installation conforms to the National Electrical Code. This information is frequently supplied by the manufacturer.

Utility Notification: No residential wind energy system shall be installed until evidence has been given that the utility company has been informed of the customer's intent to install an interconnected customer-owned generator. Off-grid systems shall be exempt from this requirement.