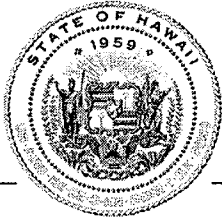


SB 2526



**DEPARTMENT OF BUSINESS,
ECONOMIC DEVELOPMENT & TOURISM**

LINDA LINGLE
GOVERNOR
THEODORE E. LIU
DIRECTOR
PEARL IMADA IBOSHI
DEPUTY DIRECTOR
ABBEY SETH MAYER
DIRECTOR
OFFICE OF PLANNING

OFFICE OF PLANNING

235 South Beretania Street, 6th Floor, Honolulu, Hawaii 96813
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Statement of
ABBEY S. MAYER
Director, Office of Planning
Department of Business, Economic Development, and Tourism
before the
**SENATE COMMITTEE ON ENERGY AND ENVIRONMENT
AND
SENATE COMMITTEE WATER, LAND, AGRICULTURE
AND HAWAIIAN AFFAIRS**
Thursday, February 18, 2010
2:45 PM
State Capitol, Conference Room 225

in consideration of
SB 2526
RELATING TO WIND ENERGY FACILITIES

Chairs Gabbard and Hee, Vice Chairs English and Tokuda and Members of the Senate Committees on Energy and Environment and Water, Land, Agriculture and Hawaiian Affairs

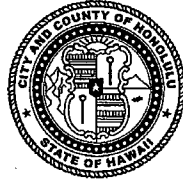
The Office of Planning opposes SB 2526 which would amend Sec. 205-4.5 (a) HRS, to establish a minimum setback of one thousand feet between a wind energy facility utilizing wind turbine generators with the capacity to generate one megawatt or more from the nearest existing off-site residential dwelling unit.

We oppose this measure because the distance buffer between wind turbines and residential units should be determined as part of the planning process on a case-by-case basis by the respective county governments.

Thank you for the opportunity to testify.

DEPARTMENT OF PLANNING AND PERMITTING
CITY AND COUNTY OF HONOLULU

850 SOUTH KING STREET, 7TH FLOOR • HONOLULU, HAWAII 96813
TELEPHONE: (808) 768-8000 • FAX: (808) 768-6041
DEPT. WEB SITE: www.honolulu.dpp.org • CITY WEB SITE: www.honolulu.gov



MUFI HANNEMANN
MAYOR

DAVID K. TANOUE
DIRECTOR
ROBERT M. SUMITOMO
DEPUTY DIRECTOR

February 18, 2010

The Honorable Mike Gabbard, Chair
and Members of the Committee on Energy
and Environment
The Honorable Clayton Hee, Chair
and Members of the Committee on Water, Land,
Agriculture and Hawaiian Affairs
State Senate
State Capitol
Honolulu, Hawaii 96813

Dear Chairs Gabbard, Hee, and Members:

**Subject: Senate Bill No. 2526
Relating to Wind Energy Facilities**

The Department of Planning and Permitting (DPP) **opposes** Senate Bill No. 2526, which seeks to establish a 1,000-foot setback from any offsite residential dwelling for wind energy facilities on agricultural land.

This bill does not provide a rationale for a setback or why 1,000 feet is an appropriate distance.

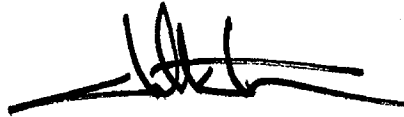
This bill will not help our economy or the development of alternative energy sources since it hampers efforts to reduce the State's dependence on fossil fuels.

The counties can develop their own appropriate regulations. As you may know, "wind machines" are a regulated use under the City's Land Use Ordinance (LUO), which provides development standards for their use. Wind machines with a rated capacity of more than one megawatt in agriculturally zoned districts require a Conditional Use Permit (CUP), allowing the department to investigate the merits of the specific wind machine placement against existing land use conditions, including effects to adjacent uses. Through a CUP, negative impacts on residences and other uses can be mitigated. Furthermore, the bill lacks any protection for onsite farm dwelling units which the CUP can provide.

The Honorable Mike Gabbard, Chair
and Members of the Committee on Energy
and Environment
The Honorable Clayton Hee, Chair
and Members of the Committee on Water, Land,
Agriculture and Hawaiian Affairs
State Senate
Senate Bill No. 2526
February 18, 2010
Page 2

We respectfully request that Senate Bill No. 2526 be filed. Thank you for the opportunity to testify.

Sincerely yours,

A handwritten signature in black ink, appearing to read 'D. Tanoue', with a long horizontal flourish underneath.

David K. Tanoue, Director
Department of Planning and Permitting

DKT: jmf
sb2526-th.doc

HAWAII RENEWABLE ENERGY ALLIANCE

46-040 Konane Place #3816, Kaneohe, HI 96744 – Telephone/FAX: 247-7753 – Email: wsb@lava.net

Officers

President
Warren S. Bollmeier II

Vice-President
John Crouch

Secretary/Treasurer
Cully Judd

Directors

Warren S. Bollmeier II
WSB-Hawaii

Cully Judd
Inter Island Solar Supply

John Crouch
Solar Power Systems
International

Herbert M. (Monty) Richards
Kahua Ranch Ltd.

TESTIMONY OF WARREN BOLLMEIER ON BEHALF OF THE HAWAII RENEWABLE ENERGY ALLIANCE BEFORE THE SENATE COMMITTEES ON ENERGY AND ENVIRONMENT, AND WATER, LAND, AGRICULTURE AND HAWAIIAN AFFAIRS

SB 2526, RELATING TO WIND ENERGY FACILITIES

February 18, 2010

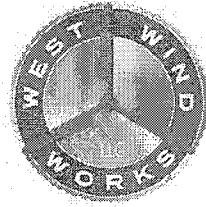
Chairs Gabbard and Hee, Vice-Chairs English and Tokuda, and members of the Committees, I am Warren Bollmeier, testifying on behalf of the Hawaii Renewable Energy Alliance (HREA). HREA is an industry-based, nonprofit corporation in Hawaii established in 1995. Our mission is to support, through education and advocacy, the use of renewables for a sustainable, energy-efficient, environmentally-friendly, economically-sound future for Hawaii. One of our 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 SB 2526 is to provide for a setback when wind energy facilities are being used in agricultural districts. HREA does not take a position on this measure at this time and provides the following comments for consideration by the committee:

1. Wind Turbines¹, Windfarms and People. People generally don't live where it is windy. Hawaii, of course, is an exception, not just because we live where it is windy, but because we also recognize the significant benefits of wind energy to the state, the community and the utility. Not the least of these benefits are the potential to gain some control over our electric bills, as we wean ourselves off oil, and the jobs and income that projects can bring to local communities and to the state.
2. Siting Requirements. Wind project developers must address a number of issues during the permitting process, some of which are related to "setback requirements." In general, setback requirements prescribe that a structure, should it fall over, should not extend beyond the project's property line. For example, the total height of a 1 MW class wind turbine on its tower with one of its blades extended in the vertical position would be on the order of 300 feet and on the order of 400 feet for a 2 to 2.5 MW class wind turbine. Thus, a 1,000 foot setback, as proposed in this measure, is 2 to 3 times the distance than is necessary to address safety concerns. In addition, the project must meet local zoning ordinances which typically include specification of maximum allowable noise levels during daytime and night time requirements. Today's advanced large wind turbines (1 MW and larger), when properly sited, can meet typical noise requirements.
3. Recommendations. Given the above, we do not feel a specific setback requirement is needed. However, if the Committee chooses to pass out this measure, we believe the 1,000 foot setback as proposed is reasonable.

Thank you for this opportunity to testify.

¹ Wind turbine is the "industry term of art" for the machines that capture the wind and convert that energy into electricity or mechanical power. Older terms not generally in use include windmills, wind turbine generators and wind energy conversion systems.



TESTIMONY BEFORE THE SENATE COMMITTEE ON ENERGY AND THE ENVIRONMENT AND THE COMMITTEE ON WATER, LAND, AND HAWAIIAN AFFAIRS REGARDING SENATE BILL # 2526, RELATING TO WIND ENERGY FACILITIES

February 18, 2010, 2:45pm, Conference Room 225, State Capitol

Chairmen Gabbard and Hee, and Vice-Chairman English and Tokuda and members of the Committees, I am Keith Avery, President, and testifying on behalf of West Wind Works, LLC (3W) and Oahu Wind Power Partners, LLC (OWP). West Wind is a local wind energy development company who has been originating wind projects in Hawaii for almost 30 years with some connection to most of the wind projects in the state. Our goal continues to be to utilize Hawaii's indigenous renewable resources to provide the people of Hawaii with long term fixed energy price and supply security. In maintaining our goal we support the multiple existing energy self sufficiency Plans and Policies as well as new, 21st century regulation and policy changes in state and local government, the Public Utilities Commission, and the electric utilities to encourage increased use of renewables in Hawaii.

SB 2526, relating to wind energy setbacks in Agricultural zones; 3W takes no position on creating mandatory set backs for wind turbines in relation to proximity to any residence. 3W has provided, in this testimony, information on several community setback requirements as well as potential noise pollution levels and blade throw science which were the main concern of a very few residents of Kahuku.

Both methods are acceptable to 3W although the 1000 ft may limit a farm or ranch from installing MW size turbines to run its facilities. We feel that the setback based on 3 times the tower height is the most appropriate methodology that will work throughout the state providing some flexibility for land owners that can adjust the height of the turbine to fit the setback; rather than the arbitrary number.

West Wind Works, LLC and Oahu Wind Power Partners, LLC appreciates the opportunity to testify on Senate Bills NO. 2526

Mahalo Nui Loa

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1/21/2010

Page | 1

Blade Throw

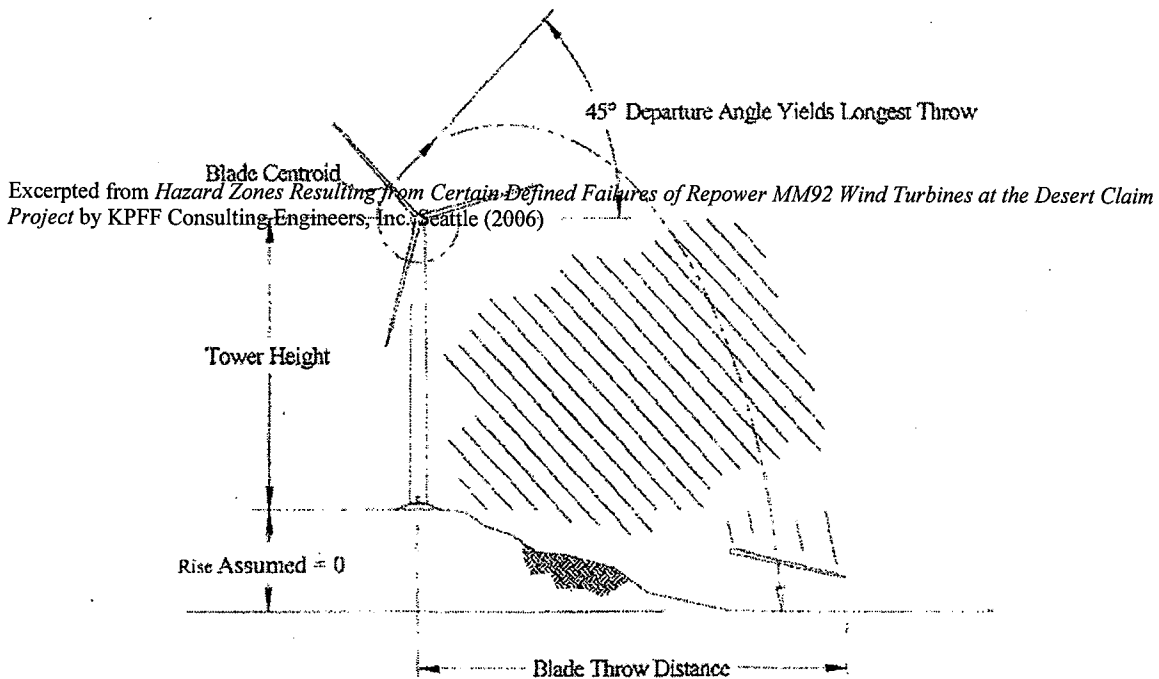
If a blade detaches from the rotor, its trajectory will be dependent upon the loading and stress state at the time of failure, and on the type and progression of failure before separation. This having been said, it is still useful to perform a simplified calculation of possible throw distance for use as a reference when considering setbacks. The simplified worst-case loss of a whole blade would occur with the blade rotating at maximum speed, when the blade is oriented at 45° from the vertical and rising. This is the classic maximum trajectory case from standard physics texts and yields the results in the table below as illustrated in Figure A. Review of these data indicates that for the REpower MM92 defined above, the maximum calculated blade throw distance is 152.3 m (500 ft.) from the tower to tip of the fallen blade.

The simplifications in this calculation can be summarized as follows. First, lacking detailed design data for the rotor blade, the blade center of gravity has been conservatively located as if the blade were of uniform thickness. In reality the blade CG is much closer to the hub so the actual initial kinetic energy would be much lower than estimated – perhaps by as much as 40%-50% - and the thrown distance will be proportionately reduced. Secondly, it is assumed that the blade travels and lands oriented parallel to its flight path (i.e., like a javelin) in plane with its original plane of rotation. Thirdly, drag forces along and perpendicular to the flight path are assumed to be extremely small compared to the weight (several tons) of each blade.

Blade Throw Distances

Turbine Model	Rotor Diameter	Rotor Speed	Tower Height	Blade Throw
REpower MM92	92.5 m (303 ft.)	17 RPM (max.)	80 m (262.5 ft.)	500 ft.

As mentioned previously, setbacks should be larger than the calculated maximum distance to account for the simplifications and uncertainties inherent in the calculations. KPFF conservatively recommends using a multiplier of 1.25, to establish a safety setback of 625 ft.





“Despite the signs, and despite the rare catastrophic destruction of a wind turbine, no member of the public has ever been injured by a wind turbine. To Swiss analyst Andrew Fritzsche, the operation of wind turbines is "practically risk-free for the public." In contrast to other energy sources, renewables "have practically no potential for severe accidents" that would endanger the public.”

“After examining several wind turbine failures in Europe and the United States, Alexi Clarke concluded that the risk of being hit within 210 meters (689 feet) of a wind turbine is comparable to the risk of dying from a lightning strike; beyond 210 meters, the risk is even lower.”

Excerpted from *Wind Energy Comes of Age* by Paul Gipe, John Wiley & Sons, Inc New York (1995), pages 361-364.

Wind Turbines and Noise

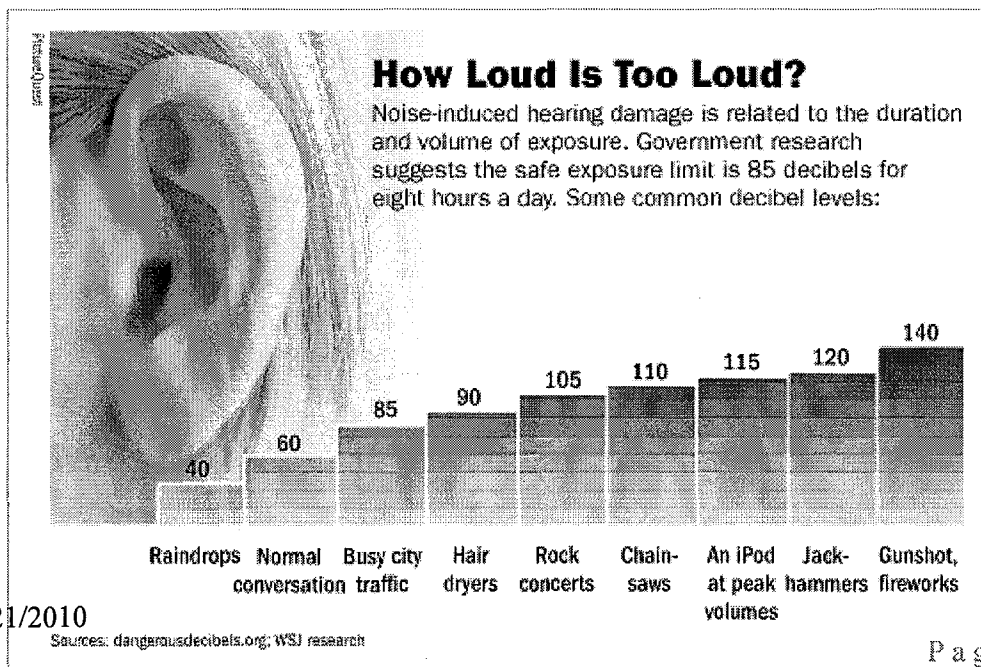
“A turbine’s sound power represents the sound energy at the center of the blades, which propagates outward at the height of the hub. While writing this paper, I visited the Bowling Green Wind Farm Project, in Bowling Green, OH. At the base of 1.8 MW turbine, we measured the noise level at 58–60 dB(A).”

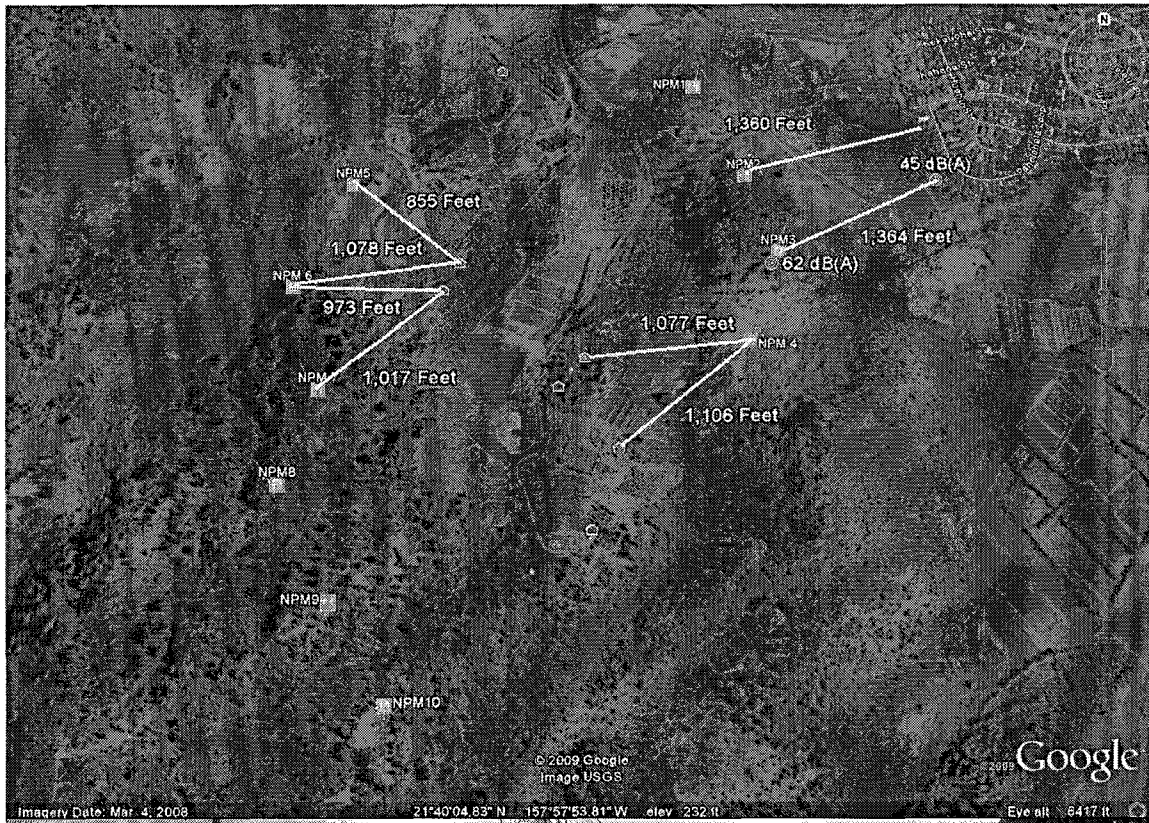
Table 5. Sound Power of Utility Scale Wind Turbines

Make and Model	Turbine Size	Sound Power
Vestas V80	1.8 MW	98 – 109 dB(A)
Enercon E70	2 MW	102 dB(A)
Enercon E112	4.5 MW	107 dB(A)
Clipper C-96	2.5 MW	105 -109 dB(A)

Excerpted from *Primer for Addressing Wind Turbine Noise* by Daniel J. Alberts. Lawrence Technological University (2006).

- Clipper Liberty C-96 Rated Acoustic Output from the nacelle = 107 dB(A) +/- 2 dB(A)
- Sound will attenuate, or be reduced, down to 62 dB(A) by the time it reaches the tower base
- Noise from the wind turbines will be attenuated down to 45 db(A) by the time it reaches the property line of the Kahuku Community.







Examples of Approved Wind Turbine Ordinances from the United States

“Many concerns associated with safety, noise, and aesthetics can be addressed by placing distance between the wind turbines and people, property lines, roads, and scenic areas. The most common way to define a setback distance is in terms of a multiple of the turbine height (for example 1.5 times the wind turbine height). Other options are to specify a fixed distance or a combination of a fixed distance and a multiple of the turbine height. When specifying the structure height, it is important to define whether the height is the top of the nacelle or the highest point reached by the rotor blade (maximum tip height, or MTH).”

October 2005 *Public Health and Safety* www.nyserda.org

CODE OF ORDINANCES - City of Newburyport, Massachusetts Codified through Ordinance of June 29, 2009. (Supplement No. 13)

SECTION XXVI. WIND ENERGY CONVERSION FACILITIES

XXVI-F District regulations.

2. Dimensional requirements.

b) Setback and clear area.

1. “The minimum distance from the base of any wind turbine tower to any existing habitable residential structure shall be equal to three (3) times the hub height of the wind turbine.
2. In addition, in order to ensure public safety and to protect the interests of neighboring property owners, the following setbacks shall be observed:
 - a. The minimum distance from the base of any wind turbine tower to any property line shall be one hundred fifty (150) feet.
 - b. There shall be no structures intended for human occupancy in the clear area.”

ORDINANCE REGULATING THE SITING OF WIND ENERGY CONVERSION SYSTEMS IN BENTON COUNTY, INDIANA

As amended by Ordinances 2006-0307-2, 2006-0307-3 and 2006-0307-4

VII. SETBACKS:

C. “Except as provided herein the setback distance for turbines with a rated capacity of 1.0 MW or less shall be 1,000 feet or more from any existing or occupied residence and turbines with a greater rated capacity shall be set back 1,000 feet or more from any existing or occupied residence or from the boundary of any to which as of the date of approval of the WECS is in a platted subdivision and shall be setback from a property line 1.1 times the height of the turbine with the blade tip at its highest point.”



Town of Westfield Local Law No. 7 for the Year 2002

WIND ENERGY CONVERSION SYSTEMS

Section 1. Section 185-43(J)(3)(c) of the Town of Westfield Zoning Code is hereby amended to read as follows:

- i. "Setback. The minimum required setback for any WECS tower from property lines shall be equal to 1.5 times the proposed structure height, including blades. The minimum setback from overhead utility lines, dwellings, agricultural buildings, or other WECS shall be equal to 1.2 times the proposed structure height, including blades. These setback requirements may be waived where the applicant submits a signed waiver from the owner(s) of the neighboring property, overhead utility lines, or other structures in relation to which the applicant does not meet the setback requirements set forth above."

Town of Henderson Local Law No. 2 of the year 2005

Article IX Wind Generation Facilities

§150-53. Additional Standards: Special Permit Criteria

- C. "The minimum required setback distance between each Wind Turbine Tower and all surrounding property lines, overhead utility lines, overhead utility lines, any dwellings or other buildings for occupancy, and any other wind turbine towers, above-ground generation facilities, shall be no less than 1.5 times the proposed structure height plus the rotor radius."

Town of Portland Local Law No. 03 of the year 2002

02-02-05: ARTICLE 800 – SUPPLEMENTAL REGULATIONS is hereby amended by adding a new section entitled "Section 818 – Wind Energy Conversion Systems" as follows:

- J. "Setback. The minimum setback for any WECS tower from property lines, overhead lines, dwellings, agricultural buildings, or other WECS shall be equal to 1.5 times the proposed structure height, including blades."

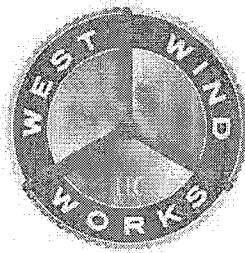
Town of Ellenburg Local Law No. 4 of 2005

WIND ENERGY CONVERSION SYSTEMS Article II

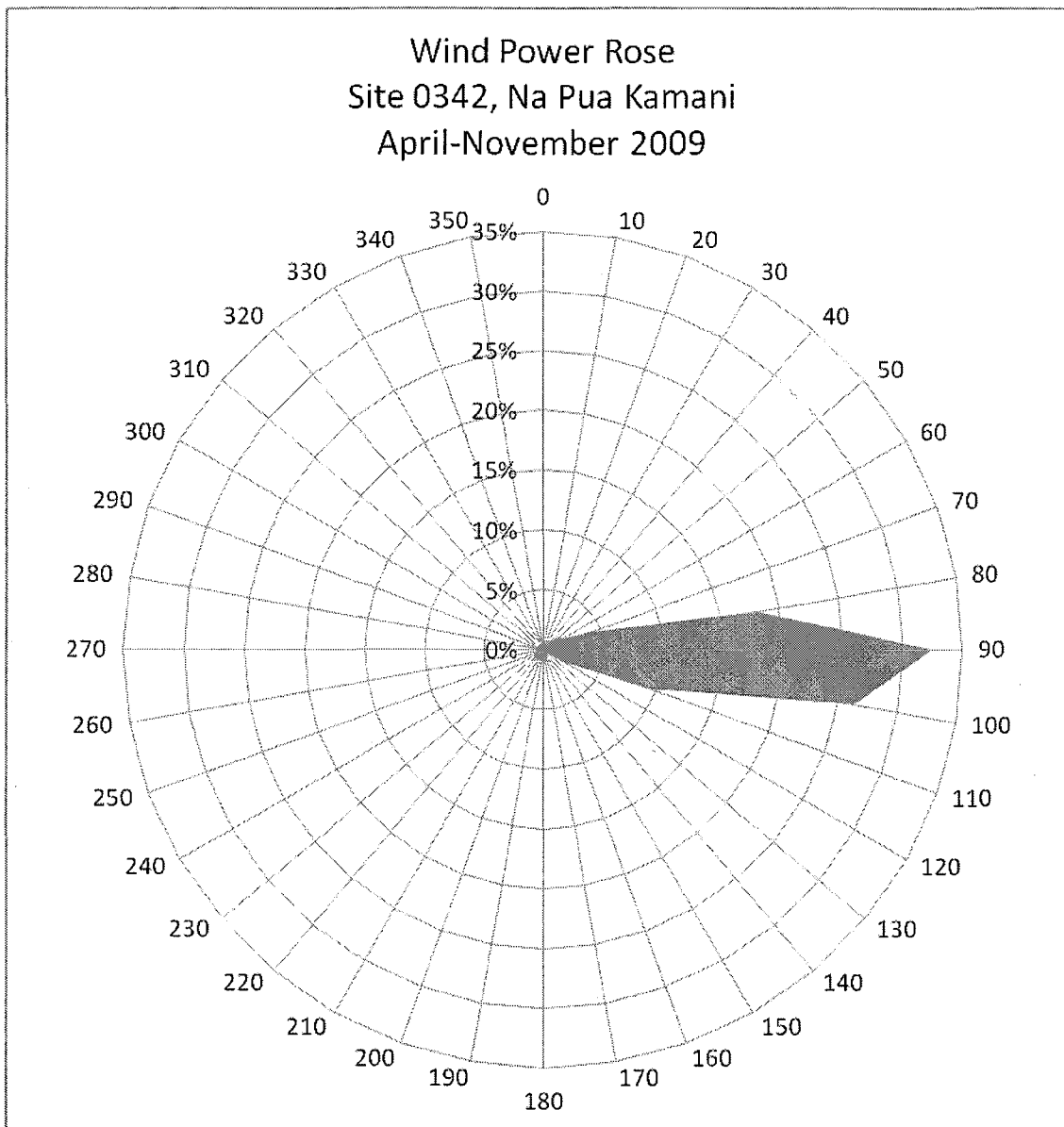
§16 Setbacks for Wind Energy Conversion Systems.

E. "Each WECS shall be setback from Site boundaries, measured from the center of the WECS:

1. 500 feet from the nearest Site boundary property line.
2. 500 feet from the nearest public road.
3. 1,000 feet from the nearest off-Site residence existing at the time of application, measured from the exterior of such residence.
4. One and a half times the Total Height of the WECS from any non-WECS structure or any above-ground utilities



Wind Power Rose
Site 0342, Na Pua Kamani
April-November 2009



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TESTIMONY IN SUPPORT OF S.B. 2526
BEFORE THE
HAWAII STATE SENATE COMMITTEE ON ENERGY AND ENVIRONMENT
AND
HAWAII STATE SENATE COMMITTEE ON WATER, LAND, AGRICULTURE, AND HAWAIIAN AFFAIRS
Thursday, February 18, 2010
2:45 p.m.
Conference Room 225
Hawaii State Capitol

Good afternoon Chairman Gabbard and Chairman Hee and Distinguished Senators.

My name is D. Noelani Kalipi and I am the Director of Government & Community Relations for First Wind. First Wind, through its affiliates, has successfully developed, constructed and operates Hawaii's largest utility-scale wind farm, Kaheawa Wind Power (30 MW) which is located on the island of Maui. We are in the final stages of development on a proposed 30 MW facility to be built in Kahuku. **I am testifying in support of S.B. 2526 as drafted.**

First Wind has been working with Kahuku residents on its proposed wind farm since 2007. From the beginning of the project, before we purchased the land upon which the majority of the project will sit, we sought input from residents and community organizations about our project. We have worked proactively to identify long-term benefits and to address concerns and issues associated with our proposed project which is located more than 1000 feet from the nearest off-site residential dwelling.

Many states around the country are watching Hawaii's progress as it utilizes its robust renewable resources to decrease its reliance on fossil fuels for electricity generation. Our state is blessed with robust natural resources which can be harnessed in a culturally and environmentally appropriate manner to enhance Hawaii's energy independence and security. Together with the U.S. Department of Energy, our State has set aggressive goals for 40% electricity generation from renewable resources by 2030. This is particularly significant given the fact that each of our inhabited islands operates as its own isolated grid and we have limited lands upon which we can develop projects. The ways in which we utilize our resources is being monitored by many states because it will serve as an important model for how our country moves forward to increase its energy independence for electricity generation.

Hawaii's efforts to support the generation of clean, renewable energy include appropriate oversight by state and local governments. S.B. 2526 is a good example of the effort to provide a buffer zone between a utility scale wind farm and a residential dwelling. The proposed 1000 foot setback between a wind turbine generator and an off-site residential dwelling is consistent with a number of model ordinances for wind energy utilized by other states with wind generation. The State of Minnesota, for example, which currently has 1809 MW¹ of wind energy generation installed, has a model ordinance that

¹ AWEA Year End 2009 Market Report, p. 4



recommends a setback equal to 1 and ½ times the height of the turbine² from property lines and a distance of 750 feet from a neighboring dwelling.

Wind developers can only develop wind farms where the wind is blowing so the resource location often has a direct impact on the general siting of a wind farm. In Hawaii, we currently have isolated island grids so we are unable to share energy between islands. Each island must look to its own resources to find ways to provide clean, renewable energy. On the island of Oahu, land is an important commodity – land with a wind resource that makes a utility-scale wind energy facility feasible is scarce. If a setback is too large on an island such as Oahu, it has the potential of causing a location with a good wind resource to become unfeasible, thereby negatively impacting the ability to maximize the wind resource on Oahu. A 1000 foot setback addresses the community’s desire to have a buffer zone and is less disruptive to maximizing the use of Hawaii’s robust natural resources than larger setbacks.

It is also important to note that S.B. 2526 establishes a minimum setback. Nothing in the proposed bill prohibits wind developers from voluntarily increasing the setback distance between the off-site residential dwellings and the wind turbine generators.

² Minnesota Model Wind Energy Ordinance

Testimony- SB 2526

Committees: Energy and Environment/Water, Land and Hawai'ian Affairs

Room: 225

Hearing Date: February 16, 2010, 2:45 pm

Aloha Chairmen Gabbard, Hee, and Joint Committee Members,

Thank you all for the opportunity to present testimony regarding Senate Bill 2526.

My name is Kent Fonoimoana and I reside at 56-423 Pahelehala Loop in Kahuku. My residence is in Ko'olau Housing which is bordered by the state agricultural park in Kahuku. I have been blessed with the opportunity to serve my community as I am an elected member of the Kahuku Community Association (KCA) Board of Directors. Although a member of KCA, the following comments are my own but may reflect the sentiments of a significant portion of the community.

I strongly support renewable energy technology and recognize the need to minimize our dependence on fossil fuels. Some of the oil we purchase on the world market may come from sources that knowingly or inadvertently support organizations that are not our friends and may wish to do us harm. Environmental and economical pressures may require our quick and decisive adaptation to changes occurring throughout the world. Our existence may depend on it. All of us need to adapt, and soon, or; we may

become beholders instead of partners, followers instead of leaders, unhealthy wishing we were healthy, and wondering where all the critters went.

On Friday the 12th, of February, another KCA board member, two area residents, and I had the opportunity to tour Kaheawa wind farm on Maui. I had a positive experience and I appreciate the site developer's efforts to work us and with the Maui community to provide our state with current and future renewable energy. I absorbed quite a bit and was able to gain first hand knowledge on some of the issues our community may have, be they perceived or real. One of these perceptions is noise. Our guide was good enough to stop at several distances and locations for us to make observations. I observed a moderate noise level directly below the turbines. At approximately ¼ mile away (1300 feet +/-) from the closest turbine, the sound level was diminished, but was still quite perceivable. At approximately ½ mile (2500 feet +/-) away from the closest turbine, little if any sound was detectable by my ears. Others in our group made similar observations.

Kahuku has played a significant part in wind energy development and research. The community is proud of this contribution and wishes to continue its efforts in this partnership. As partners, we would like the opportunity to meet with the developer, state, and local agency leaders to discuss the possible placement of a wind farm placed within the state agricultural park which abuts the Ko'olau Housing subdivision. Members of the Kahuku community at large and KCA would like to first meet together before this bill advances. A KCA quarterly general membership meeting is scheduled for 7:00 pm February 18, 2010 at the Kahuku Community Center.

In October or November of 2009, Keith Avery of O'ahu Wind Works LLC presented the current wind farm proposal to members of the Kahuku community. This specific discussion was subsequently placed on the Board's January agenda. On January 21, 2010, the KCA Board met with O'ahu Wind Works, First Wind, and HECO officials to discuss; the placement of a wind farm within the Kahuku agricultural park, set back recommendations, and other potential impacts on the community. It is my understanding that the issue is on the March 2010 agenda of the Ko'olau Neighborhood Board. The developer, the Kahuku community, state and local agency leaders, and the public at large should meet together to further discuss and explore issues associated with wind turbines placed in close proximity to a residential neighborhood. Besides the obvious visual impacts, there are other issues. Homeowner equity issues, health affects, and most of all, safety implications must be addressed before determining any standardized set back distance. Many European counties that have long used this technology recommend a 1.5 – 2.0 kilometer set back. One prominent factor in the determination of this recommendation was to bolster public acceptance.

The Kahuku area is unique as it is well suited for the application of wind energy development and the community has accepted the opportunity to contribute. However, the Kahuku community may have valid issues with portions of the planned wind farm to be located within the nearby state agricultural park. Of the ten turbine sites proposed by O'ahu Wind Works LLC, most Kahuku residents have concerns with four that may be installed nearest to the community's mauka boundary. These four turbines and tower sites are proposed to be placed approximately 1200'-1500' from the

community boundary on foothills directly behind Ko'olau Housing. The proposed towers and turbines are the largest that are available, 400 feet plus from base to maximum tip height. Their large size in addition to being placed on an elevated site will be quite intrusive and will "loom over" the neighborhood. In the afternoon hours, area residents will be subject to continuous shadow flicker caused by the rotating blades. Audibly, the residents will be exposed to constant and/or intermittent noise depending on the wind conditions.

With full consent and Board backing, I now speak as a representative of KCA Board of Directors. The KCA Board strongly opposes the placement of four of the ten turbines that O'ahu Wind Works LLC has proposed to install within the Kahuku state agriculture park. Although the four turbines in question may be a little more than 1000 feet away from the closest offsite dwelling, the potential impacts on the entire community are unacceptable. We respectfully ask O'ahu Wind Works LLC, or any future developer, to move the four sites to a more acceptable site.

Therefore, based on KCA's position, other issues mentioned above, and my personal observations, I oppose this bill as written. It may be prudent to amend the language concerning the distance requirement to read "no less than 2500 feet from the nearest offsite dwelling". Or in the alternative and to avoid implementing an arbitrary distance, deferring SB 2526 until the proper site specific studies have been undertaken, completed, and disseminated. An assessment that specifically addresses risks to those who live in close proximity to these four particular turbines must be done first. These risks and issues may include, but are not limited to: industrialized

look of area, loss of view, lower property valuation, adverse affects to health and wellness, and potential safety issues that may occur as a result of a nature related event such as a hurricane.

Thank you,

Kent Fonoimoana
56-423 Pahelehala Loop
Kahuku, Hawai'i 96731

Proposed Amendment to - SB 2526

Committees: Energy and Environment/Water, Land and Hawai'iian Affairs

Room: 225

Hearing Date: February 16, 2010, 2:45 pm

Aloha Chairmen Gabbard, Hee, and Joint Committee Members,

Section (14) currently reads:

(14) Wind energy facilities, including the appurtenances associated with the production and transmission of wind generated energy; provided that the wind energy facilities and appurtenances are compatible with agriculture uses and cause minimal adverse impact on agricultural land; provided that any wind energy facility utilizing wind turbine generators with the capacity to generate 1 megawatt or more shall be located no less than one thousand feet from the nearest off-site residential dwelling unit in existence at the time of the application for necessary permits, measured from the center of the wind turbine generator to the exterior of the residential dwelling unit;

I propose amending the language concerning minimum distance to read:

(14) Wind energy facilities, including the appurtenances associated with the production and transmission of wind generated energy; provided that the wind energy facilities and appurtenances are compatible with agriculture uses and cause minimal adverse impact on agricultural land; provided that any wind energy facility utilizing wind turbine generators with the capacity to generate 1 megawatt or more shall be located no less than **two thousand five hundred feet** from the nearest off-site residential dwelling unit in existence at the time of the application for necessary permits, measured from the center of the wind turbine generator to the exterior of the residential dwelling unit;

Amending the distance requirements may; increase public acceptance of large wind tower and turbines in other suitable sites, increase the margin of safety for residents living in close proximity to large 1 megawatt turbines and towers, lower adverse affects on health and wellness issues that may be detrimental to humans.

Respectfully,

Kent Fonoimoana
56-423 Pahelehala Loop
Kahuku, Hawai'i 96731

gabbard1 - Carlton

From: mailinglist@capitol.hawaii.gov
Sent: Wednesday, February 17, 2010 7:47 AM
To: ENETestimony
Cc: kevink59@gmail.com
Subject: Testimony for SB2526 on 2/18/2010 2:45:00 PM

Testimony for ENE/WTL 2/18/2010 2:45:00 PM SB2526

Conference room: 225
Testifier position: support
Testifier will be present: No
Submitted by: Kevin Kelly
Organization: Individual
Address: PO Box 447 Hawaii
Phone: 808-383-4481
E-mail: kevink59@gmail.com
Submitted on: 2/17/2010

Comments:

Dear Senators Hee and Gabbard and other committee members,

My name is Kevin Kelly and I live in Kahuku and am active in a number of civic organizations and activities. I conditionally support this bill as written, but ask your committees to please consider increasing the setback from a minimum of 1000' to 2500' to mitigate noise issues associated with wind turbine development.

I believe the people of Kahuku are very receptive to hosting green energy initiatives and welcome these companies to the country, but please help us make these relationship beneficial to both the community and the energy developer.

Thank you for this opportunity to testify.

Kevin Kelly

gabbard1 - Carlton

From: mailinglist@capitol.hawaii.gov
Sent: Wednesday, February 17, 2010 7:37 AM
To: ENETestimony
Cc: choon@hawaii.rr.com
Subject: Testimony for SB2526 on 2/18/2010 2:45:00 PM

Testimony for ENE/WTL 2/18/2010 2:45:00 PM SB2526

Conference room: 225
Testifier position: oppose
Testifier will be present: No
Submitted by: Choon James
Organization: Individual
Address: 56-1081 Kam Hwy, Kahuku 96731
Phone: 808 2923 9111
E-mail: choon@hawaii.rr.com
Submitted on: 2/17/2010

Comments:
Testimony - SB 2526

Committees: Energy and Environment/Water, Land and Hawaiian Affairs

Room: 225

Hearing Date: February 16, 2010 , 2:45 pm

Chairmen Gabbard, Hee, and Committee Members,

I oppose SB 2526 as the buffer zone is DEFINITELY INSUFFICIENT enough to eliminate issues connected with this technology. These issues include; audible and visual impacts, industrial encroachment on residential neighborhoods, and potential health and safety issues.

A more acceptable distance of one half to one full mile should be considered as this may; increase public acceptance of large wind tower and turbines in other suitable sites, increase the margin of safety for residents living in close proximity to large 1 megawatt turbines and towers, lower adverse affects on health and wellness issues that may be detrimental to humans.

Thank you for your consideration on this matter.

Chairman Gabbard, Hee, and Committee Members:

I oppose SB 2526, as the buffer zone does not address all issues connected with this technology.

Properly sited wind farms benefit communities as a local and renewable energy source and any impact on those communities should be satisfactorily resolved in a fair manner prior to a project being approved solely on a “standard” measured by a set distance of 1000 feet.

A case by case permit process or a more acceptable distance of one half to one full mile should be considered when residential units within communities are to be affected by the continuous “whooshing and whistling” sound as well as the “shadow flicker” that occurs when the blades of the turbine pass in front of the sun.

Wind plants are always located where the wind speed is higher than average and the “background” sound of the wind will often “mask” any sounds that might be produced by operating wind turbines

An occasional exception to this general rule occurs when a wind plant is sited in hilly terrain where nearby residences are in dips or hollows downwind that are sheltered from the wind – in such cases, turbine noise may carry further than on flat terrain.

Therefore, since the wind industry seeks to be a good neighbor and provide communities with a clean energy source, it is in the best interest of all of us who live in Hawaii and support clean renewable energy to address the approval process for wind farm placement in a manner considerate of those being affected and not automatically put a “stamp of approval” on every application that comes through the door for a permit.

Mahalo for your consideration on this matter.

Respectfully,

Maria Pacheco

Testimony –SB 2526 STRONGLY OPPOSE

Committees: Energy & Environmental,
Water, Land and Hawaiian Affairs

Room 225

Hearing Date: February 18, 2010, 2:45 pm.

Aloha Chair Gabbard, Hee and Committee Members:

I'm in strong opposition to SB 2526 in it's present form. A safer and necessary distance for 1+ megawatt turbine generators would be no less than one half mile and a mile is preferable.

While I'm definitely a proponent for alternative energy sources, clearly the close proximity to residential areas is a major concern for regular noise output from the turbines. Families must not be exposed to such noise pollution nor the looming visual aspects of these towers. Further with farming and dwellings nearby I would raise examination of impacts on their environment.

Please fix this proposed bill by increasing the setback distance to no less than one half mile to one mile for health and safety precautions.

Mahalo nui,
Margaret Primacio
Kahuku

gabbard1 - Carlton

From: mailinglist@capitol.hawaii.gov
Sent: Wednesday, February 17, 2010 2:24 PM
To: ENETestimony
Cc: lehua@vcasa.net
Subject: Testimony for SB2526 on 2/18/2010 2:45:00 PM

Testimony for ENE/WTL 2/18/2010 2:45:00 PM SB2526

Conference room: 225
Testifier position: oppose
Testifier will be present: Yes
Submitted by: Lehua
Organization: Individual
Address:
Phone:
E-mail: lehua@vcasa.net
Submitted on: 2/17/2010

Comments:

Chairmen Gabbard, Hee, and Committee Members,

I oppose SB 2526 as the buffer zone is not sufficient enough to eliminate issues connected with this technology. These issues include; audible and visual impacts, industrial encroachment on residential neighborhoods, and potential health and safety issues.

A more acceptable distance of one half to one full mile should be considered as this may; increase public acceptance of large wind tower and turbines in other suitable sites, increase the margin of safety for residents living in close proximity to large 1 megawatt turbines and towers, lower adverse affects on health and wellness issues that may be detrimental to humans.

Thank you for your consideration on this matter.

gabbard1 - Carlton

From: kc connors [kcstuff@hotmail.com]
Sent: Wednesday, February 17, 2010 4:51 PM
To: ENETestimony
Subject: Oppose SB2526

Aloha Chairman Gabbard, Chairman Hee & Committee Members,

Respectfully I oppose SB2526. There needs to be a much larger buffer area between wind turbine generators and our residential areas. The quality of life and the safety of the Community needs to be taken into greater consideration when placing these huge wind turbines and wind farms.

While we all support alternative energy in Hawaii, a much larger buffer zone of a half to one mile would ensure the wellness, beauty and safety of our local Communities. Mahalo for taking these issues into consideration.

Sincerely,
Kathleen Connors
Kaneohe, HI

Hotmail: Powerful Free email with security by Microsoft. [Get it now.](#)

gabbard1 - Carlton

From: mailinglist@capitol.hawaii.gov
Sent: Wednesday, February 17, 2010 6:01 PM
To: ENETestimony
Cc: rosepadeken@yahoo.com
Subject: Testimony for SB2526 on 2/18/2010 2:45:00 PM

Testimony for ENE/WTL 2/18/2010 2:45:00 PM SB2526

Conference room: 225
Testifier position: oppose
Testifier will be present: No
Submitted by: Frederick and Rose Padeken
Organization: Individual
Address: Pahelehala Loop Kahuku, HI
Phone:
E-mail: rosepadeken@yahoo.com
Submitted on: 2/17/2010

Comments:
Testimony - SB 2526

Committees: Energy and Environment/Water, Land and Hawaiian Affairs

Room: 225

Hearing Date: February 18, 2010 , 2:45 pm

Chairmen Gabbard, Hee, and Committee Members,

I oppose SB 2526 as the buffer zone is not sufficient enough to eliminate issues connected with this technology. These issues include; audible and visual impacts, industrial encroachment on residential neighborhoods, and potential health and safety issues.

A more acceptable distance of one half to one full mile should be considered as this may; increase public acceptance of large wind tower and turbines in other suitable sites, increase the margin of safety for residents living in close proximity to large 1 megawatt turbines and towers, lower adverse affects on health and wellness issues that may be detrimental to humans.

Thank you for your consideration on this matter.

Frederick and Rose Padeken
Current Kahuku residents for 27 years

gabbard1 - Carlton

From: mailinglist@capitol.hawaii.gov
Sent: Wednesday, February 17, 2010 6:43 PM
To: ENETestimony
Cc: reed@ctech.com
Subject: Testimony for SB2526 on 2/18/2010 2:45:00 PM

Testimony for ENE/WTL 2/18/2010 2:45:00 PM SB2526

Conference room: 225
Testifier position: oppose
Testifier will be present: No
Submitted by: Reed Copsey
Organization: Individual
Address: 56-155A Kamehameha Hwy Kahuku, HI 96731
Phone: 808-447-9751
E-mail: reed@ctech.com
Submitted on: 2/17/2010

Comments:

I believe the proposed buffer distance is too short and that an environmental impact statement and human health study should be conducted if large windmills are to be located with one mile of residential areas.

gabbard1 - Carlton

From: mailinglist@capitol.hawaii.gov
Sent: Wednesday, February 17, 2010 10:46 PM
To: ENETestimony
Cc: anne@cms-pacific.com
Subject: Testimony for SB2526 on 2/18/2010 2:45:00 PM

Testimony for ENE/WTL 2/18/2010 2:45:00 PM SB2526

Conference room: 225
Testifier position: oppose
Testifier will be present: No
Submitted by: Anne Copsey
Organization: Individual
Address: 56-155A Kamehameha Highway Kahuku, Hi 96762
Phone: 808 293 1431
E-mail: anne@cms-pacific.com
Submitted on: 2/17/2010

Comments:

Chairmen Gabbard, Hee, and Committee Members,

I believe the proposed buffer distance is too short and that an environmental impact statement and human health study should be conducted if large/industrial windmills are to be located with one mile of residential areas.

Thank you for your consideration on this matter.

Aloha,
Anne Copsey
PO Box 971
Laie, HI 96762
cell: 808 223 6080
office: 808 293 1431
fax: 714 908 7672