NEIL ABERCROMBIE
Governor

SCOTT E. ENRIGHT
Chairperson, Board of Agriculture

State of Hawaii
DEPARTMENT OF AGRICULTURE
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TESTIMONY OF SCOTT E. ENRIGHT
CHAIRPERSON, BOARD OF AGRICULTURE

BEFORE THE HOUSE COMMITTEE ON AGRICULTURE
THURSDAY, FEBRUARY 6, 2014
9:40 A.M.
Room 312

HOUSE BILL NO. 2203
RELATING TO SOLAR ENERGY

Chairperson Wooley and Members of the Committee:

Thank you for the opportunity to testify on House Bill No. 2203 that seeks to increase the amount of "B" and "C" rated lands that can be used for solar energy facilities. The Department of Agriculture has strong concerns about this measure. Renewable energy development is essential to Hawaii's energy security; however, it should be promoted and implemented in a manner that protects the prime agricultural land that is fundamental to agricultural production and food security.

The amendment to Section 205-2 promotes the concept of co-existence of agricultural activities with solar energy facilities. According to our research, solar energy facilities occupy land in a manner that does not easily accommodate co-existing agricultural activities, unlike wind energy. According to a report done by the Natural Renewable Energy Laboratory (NREL) for the U.S. Department of Energy, Office of Energy Efficiency and Renewable Energy (Technical Report NREL/TP-6A20-60240, December 2013), "There has been minimal research regarding the potential for large-scale solar facilities to be co-located with agriculture or native vegetation. Certain renewable technologies, such as wind power, are commonly deployed in agricultural areas with little impact on farming activities, yet solar technologies have not yet seen

similar developments (Holmes and Papay 2011; Beckman and Xiarchos 2013)." (emphasis added; Report, page 3).

The amendment to Section 205-4.5 promotes the concept of providing "an area of land for agricultural food production that is equal to or greater than the area occupied by the solar energy equipment". The Department would like to point out that there are numerous details that must be addressed should such an exchange take place.

According to Office of Planning statistics, about 75 percent of the 1.9 million-acre Agricultural District has "D" and "E" ratings. We strongly believe that these poorer-quality agricultural lands be considered first for siting solar energy facilities. Existing State law does not impose limits on the acreage of "D" and "E" rated lands that can be used for solar energy facilities. On the other hand, "B" and "C" rated agricultural lands comprise 21 percent of Hawaii's agricultural lands, have fair to good capacity for intensive agricultural production and are more likely to be considered and designated as Important Agricultural Lands.

Finally, we believe that the proposed amendments to Section 205-2 and Section 205-4.5 should be the same.

Thank you for the opportunity to present our testimony.

DEPARTMENT OF BUSINESS, ECONOMIC DEVELOPMENT & TOURISM

NEIL ABERCROMBIE
GOVERNOR

RICHARD C. LIM
DIRECTOR

MARY ALICE EVANS
DEPUTY DIRECTOR

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Statement of
RICHARD C. LIM
Director
Department of Business, Economic Development, and Tourism
before the
HOUSE COMMITTEE ON AGRICULTURE

Thursday, February 6, 2014
9:40 AM
State Capitol, Conference Room 312

in consideration of
HB 2203
RELATING TO SOLAR ENERGY.

Chair Wooley, Vice Chair Onishi, and Members of the Committee.

The Department of Business, Economic Development, and Tourism (DBEDT) supports the intent of HB 2203, which would permit solar energy facilities on class B or C agricultural lands, provided the area occupied by the solar energy facilities is also devoted to agricultural activities. The measure also requires that solar energy facilities be removed within twelve (12) months of the conclusion of the operation.

Our state Energy Policy seeks to make the best use of Hawaii's land and resources by balancing technical, economic, environmental, and cultural considerations. DBEDT respectfully suggests that thoughtful clarification of the following provision could help achieve this balance:

- Page 4, line 15: In regards to "devoted to agricultural activities," greater clarity on what this constitutes could help ensure that the will of the Legislature is accurately interpreted and implemented.

DBEDT supports the mandated decommissioning and removal of solar energy facilities within twelve (12) months of the conclusion of the operation.

We defer to the appropriate agencies regarding whether a State Special Use Permit (SUP) should be required prior to placing solar energy facilities on agricultural lands.

Thank you for the opportunity to provide these comments.

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Statement of
JESSE K. SOUKI
Director, Office of Planning
Department of Business, Economic Development, and Tourism
before the
HOUSE COMMITTEE ON AGRICULTURE
Thursday, February 6, 2014
9:40 AM
State Capitol, Conference Room 312

in consideration of
HB 2203
RELATING TO SOLAR ENERGY.

Chair Wooley, Vice Chair Onishi, and Members of the House Committee on Agriculture.

House Bill 2203 amends the State Land Use Law at Hawaii Revised Statutes (HRS) §§ 205-2 and 205-4.5, to allow "solar energy facilities" within the State Agricultural Land Use District[1] on soils rated by the Land Study Bureau's Overall Productivity Rating (LSB) as "B" and "C."[2]

Currently, these statutory provisions allow solar energy facilities within the State Agricultural District. However, the amendment to HRS § 205-2 would expand the land coverage of solar energy facilities on LSB "B" and "C" lands from 10 percent or 20 acres (whichever is

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[1] *See* HRS § 205-2 ("There shall be four major land use districts in which all lands in the State shall be placed: urban, rural, agricultural, and conservation." As of November 12, 2013, approximately 49% of lands in the state are in the Conservation District and 46% is in the Agricultural District.)

[2] *See Land Study Bureau (LSB) Detailed Land Classification*, Office of Planning, *at* http://files.hawaii.gov/dbedt/op/gis/data/lsb.pdf (The Land Study Bureau of the University of Hawaii prepared an inventory and evaluation of the State's land resources during the 1960's and 1970's. The Bureau grouped all lands in the State, except those in the urban district, into homogeneous units of land types; described their condition and environment; rated the land on its over-all quality in terms of agricultural productivity; appraised its performance for selected alternative crops; and delineated the various land types and groupings based on soil properties and productive capabilities. A five-class productivity rating system was developed with "A" representing the class of highest productivity and "E" the lowest. Ratings were developed for both over-all productivity, and for specific crops. HRS Chapter 205 uses over-all productivity ratings.).

lesser) to any amount of land so long as "the area occupied by the solar energy facilities is also devoted to agricultural activities." In addition, there appears to be an inconsistent amendment to HRS § 205-4.5, which allows any amount of solar energy facilities so long as an "area of land for agricultural food production that is equal to or greater than the area occupied by the solar energy equipment" is set aside. These statutory provisions would continue to prohibit solar energy facilities on LSB "A" lands within the State Agricultural District.

The Hawaii State Plan, passed by the legislature in 1978 and subsequently amended, promotes both agriculture and the promotion and development of renewable energy for current and future generations.[3] As the Committee balances these complex, often competing policy objectives, we provide the following comments for your consideration:

- Statewide, LSB soil productivity ratings of lands within the State Agricultural District are distributed as follows:
    - 3.1%, LSB "A"
    - 6.2%, LSB "B"
    - 14.9%, LSB "C"
    - 24.9%, LSB "D"
    - 50.9%, LSB "E"
- The counties and the State have not completed the process of identifying important agricultural lands (IAL) to the State of Hawaii. The intent of the IAL law is to "conser[ve] the State's agricultural land resource base and assur[e] the long-term availability of agricultural lands for agricultural use[.]"[4] The IAL law, passed in 2005, implements Article XI, Section 3, of the Hawaii State Constitution, which directs the State to "conserve and protect agricultural lands, promote diversified agriculture, increase agricultural self-sufficiency and assure the availability of agriculturally suitable lands."
- Allowing non-agricultural uses in the State Agricultural District may contribute to the impermanence syndrome, whereby agricultural use declines due to farmers' disinvestment in their farm operations in anticipation of development. This has been

[3] *See* HRS §§ 226-7 and 226-18 (relating to the State's "Objectives and policies for the economy—agriculture" and "Objectives and policies for facility systems—energy," respectively).

[4] HRS § 205-41.

observed to occur where competing uses are allowed in areas designed for agricultural uses.[5]

- The list of non-agricultural uses on LSB "B" and "C" lands has grown over time. Currently, HRS § 205-2 allows the following non-agricultural uses: wind generated energy production; biofuel production; limited solar energy facilities; wind machines and wind farms; small-scale meteorological, air quality, noise, and other scientific and environmental data collection and monitoring facilities; open area recreational facilities; and geothermal resources exploration and geothermal resources development. The list of non-food related uses is longer still.
- The State Special Permit under HRS § 205-6 grants counties the authority to allow "certain unusual and reasonable uses within agricultural and rural districts other than those for which the district is classified[.]" In other words, the Special Permit process allows uses in the State Agricultural District that are not agricultural uses or related to agricultural uses on a case-by-case basis. Although we do not advocate for allowing non-agricultural uses within the State Agricultural District, this established process allows counties to review non-agricultural uses to mitigate impacts on the State Agricultural District. As HRS §§ 205-2 and 205-4.5 are currently drafted, Special Permits are not allowed for solar energy facilities on (1) LSB "A" lands, or (2) LSB "B" and "C" lands for more than 10 acres or 20 percent of a parcel (whichever is lesser).

Thank you for the opportunity to testify on this measure.

[5] *Impermanence Syndrome – Have you got it?*, Rutgers, *at* http://njsustainingfarms.rutgers.edu/farmlandissues.html (last visited, Feb. 3, 2014).

LAND USE COMMISSION
Department of Business, Economic Development & Tourism
State of Hawai`i

Statement of
Daniel E. Orodenker
Executive Officer
Land Use Commission
Before the
House Committee on Agriculture
February 6, 2014
9:40 AM
State Capitol, Conference Room 312

In consideration of
HB 2203
RELATING TO SOLAR ENERGY

Chair Wooley, Vice Chair Onishi, and members of the Committee on Agriculture:

The Land Use Commission takes no position with regard to the policy considerations raised by this measure. We do, however, offer the following comments regarding HB 2203 that seeks to make solar energy facilties a permissible use within the State Agricultural District on lands classified by the Land Study Bureau (LSB) as class B or C.

We would recommend that the measure be modified to require that solar energy facilities proposed for LSB class A, B, or C lands go through the State Special Permit process. This process, along with any specific limitations on parcel percentage (%) or acreage the Legislature may require, can insure that an open public forum is used to balance competing uses on our best agricultural lands and identify the parties responsible for implementing and enforcing any conditions of approval.

Thank you for the opportunity to testify on this matter.

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onishi2-Micah-Seth

From: mailinglist@capitol.hawaii.gov
Sent: Tuesday, February 04, 2014 10:35 AM
To: AGRtestimony
Cc: carl.campagna@kamakagreen.com
Subject: Submitted testimony for HB2203 on Feb 6, 2014 09:40AM

HB2203
Submitted on: 2/4/2014
Testimony for AGR on Feb 6, 2014 09:40AM in Conference Room 312

Submitted By	Organization	Testifier Position	Present at Hearing
Carl	Individual	Support	No

Comments: My name is Carl Campagna and I am a local farmer-mentor from The Littlest Co-Op and Kamaka Green. I am in full support of this Bill as it increases he opportunities for both Food and Energy Security. There are many opportunities to combine Food Plant production with Renewable Energy production. This also allows for greater opportunity to reduce the costs of farming.

Please note that testimony submitted less than 24 hours prior to the hearing, improperly identified, or directed to the incorrect office, may not be posted online or distributed to the committee prior to the convening of the public hearing.

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Rep. Jessica Wooley, Chair, House Committee on Agriculture
Rep. Richard Onishi, Vice Chair, House Committee on Agriculture
Members of House Committee on Agriculture
Hawaii State Legislature
State Capitol
415 S. Beretania Street
Honolulu, HI 96813

TESTIMONY **IN SUPPORT** OF HOUSE BILL 2203 – RELATING TO SOLAR ENERGY

Dear Chair Wooley, Vice Chair Onishi and members of the House Committee on Agriculture,

We own and operate Tin Roof Ranch, an environmentally-friendly, organic, and sustainable farm located on the North Shore of O 'ahu in beautiful Haleiwa. Tin Roof Ranch produces organic, free range chickens and eggs and other organic produce for purchase at local farmers' market.

We also raise sheep and lambs that we sell to local butchers, stores and restaurants. Demand for lamb and sheep products is so high we cannot keep up with the requests and many times we have to turn down offers to buy our lamb and sheep products.

We support H.B. 2203 because it will provide an incentive for large agricultural landowners to open up more land on O'ahu for sheep farming. The solar energy operation could also help to subsidize segments of the sheep farming operation including lease rent, fencing and water production making farming more cost-effective for the farmer.

Sheep farming needs large tracts of land to be successful because sheep forage in herds within blocks of pasture and then are moved through cross fencing to other sections of the land to allow for regrowth of grass.

Because we pride ourselves on running a farm that utilizes sustainable practices, we also like the idea that our sheep operations would coexist with renewable energy and our sheep could help with grass maintenance for the solar panels.

We respectfully request that you approve H.B. 2203 as a show of support for renewable energy and sheep farming.

Aloha,
Luann and Gary Gunder
Tin Roof Ranch
Haleiwa, Hawaii

TESTIMONY OF WARREN BOLLMEIER ON BEHALF OF THE HAWAII RENEWABLE ENERGY ALLIANCE BEFORE THE HOUSE COMMITTEE ON AGRICULTURE

HB 2203, RELATING TO SOLAR ENERGY

February 6, 2014

Chair Wooley, Vice-Chair Onishi and members of the Committee, 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 HB 2203 is to enable the complementary uses of utility scale solar energy generation and local food production on agricultural land with soil classified by the land study bureau's detailed land classification as overall (master) productivity rating class B or C.

HREA **supports** this measure with the following comments and recommendations:

1) Comments. The intent of the measure clear, as the measure:

   a) would promote the concept of dual use of Class B & C agricultural lands for agricultural activities and solar energy facilities.

   b) represents a creative approach to making the best use of available resources to meet Hawaii's clean energy goals and support a strong agricultural industry, i.e., this is at the heart of increasing both our Food and Energy Security.

   c) does not propose a permanent use of the land for solar, e.g., this measure requires the removal of the solar energy facilities at the conclusion of operation and restoration of the site to its pre-solar facility condition.

2) Recommendations: We recommend that you pass this measure out.

Mahalo for this opportunity to testify.

TESTIMONY OF
CRYSTAL KUA, DIRECTOR OF EXTERNAL AFFAIRS – HAWAIʻI
FIRST WIND SOLAR GROUP
BEFORE THE
HOUSE COMMITTEE ON AGRICULTURE
February 6, 2014
9:40 a.m.
Hawaiʻi State Capitol Room 312

TESTIMONY IN SUPPORT OF H.B. 2203 – RELATING TO SOLAR ENERGY

Aloha Chair Wooley, Vice Chair Onishi and members of the House Committee on Agriculture,

Mahalo for this opportunity to testify in support of H.B. 2203 with amendments.

First Wind develops, finances, builds and operates utility-scale renewable energy projects throughout the United States and is the largest producer of clean energy in Hawaiʻi with 150 megawatts generated by our four wind projects on Oʻahu and Maui.

In 2013, First Wind formed the First Wind Solar Group to explore potential development opportunities near the company's wind projects in the Northeast, the West and Hawaiʻi.

In Hawaiʻi, First Wind is developing four utility-scale solar projects on Oʻahu – two in Mililani, one in Waiawa and one adjacent to our wind farm in Kawailoa – for a total of 132 megawatts of new renewable energy. These projects will produce enough energy to:

- Power the equivalent of 40,000 homes on Oʻahu.
- Save Oʻahu residents approximately $400 million over the 20-year life of the projects compared to Hawaiian Electric Company's current avoided cost of energy, if the projects are completed before the sunset of the solar federal tax credits in 2016.
- Avoid using 500,000 barrels of oil a year.

Both the Waiawa and Kawailoa projects are being proposed on agricultural land with a class B soil rating. These locations provide the optimum conditions to set up solar panels – relatively flat terrain with significant solar energy potential.

Currently, HRS Chapter 205 limits solar energy projects on class B and C agricultural land to 20 acres. In order to be financially viable and achieve the kind of clean energy production and cost-savings described earlier, utility-scale solar facilities will take up more than 20 acres. Our Waiawa project is proposed for 228 acres and Kawailoa is planned for 327 acres.

First Wind understands and is sensitive to the recent public conversations surrounding the use of agricultural land which is why First Wind supports H.B. 2203.

This bill will allow for solar projects on tracts of B and C agricultural land larger than 20 acres if the project also makes the land available for compatible agricultural activity. For First Wind, one leading

contender for an agricultural activity that is proven and compatible with solar operations is sheep farming, which is utilized on solar farms in Europe and on the mainland U.S. but we are also open to other recommendations for a compatible agricultural activity.

We see this dual use of the land as a win for renewable energy, a win for local agriculture, and a win for Hawai ʻi residents for the following reasons:

- The solar project could help provide affordable pasture land and infrastructure (e.g. fencing and roads) for the farmer or rancher, lowering costs and helping to promote local agribusiness.
- Sheep grazing could provide a sustainable way to manage vegetation, keeping the grass and weeds from shading the solar panels; and
- The combined use could provide local residents with both lower-cost clean energy and locally-raised agricultural products.

Because of recent comments we received from local farmers, ranchers and the different agencies with jurisdiction over HRS Chapter 205, we are requesting the bill be amended to add that below-market lease rent also be made available. We are also requesting technical amendments to correct drafting errors on page 16 of the bill.

For all these reasons, we respectfully request that the committee approve H.B. 2203 with the suggested amendments.

Mahalo.

H.B. 2203 - PROPOSED AMENDMENTS

Section 205-2 (6) (B) on page 4:
…unless the area occupied by the solar energy facilities is also ~~devoted to~~ **made available for compatible** agricultural activities **at a lease rate that is at least fifty percent below the going market rent for comparable properties**; provided further that the solar energy facilities shall be decommissioned and removed within twelve months of the conclusion of operation; and
For the purposes of this paragraph, "agricultural activities" means the activities described in paragraphs (1) to (3);

Section 205-4.5 (20) on page 16:
Solar energy facilities**;** ~~that provide an area of land for agricultural food production that is equal to or greater than the area occupied by the solar energy equipment, which equipment shall be decommissioned and removed within twelve months of the conclusion of the operation;~~ **provided that the area occupied by the solar energy facilities is also made available for compatible agricultural activities at a lease rate that is at least fifty percent below the going market rent for comparable properties; provided further that the solar energy facilities shall be decommissioned and removed within twelve months of the conclusion of operation; and**
For the purposes of this paragraph, "agricultural activities" means the activities described in paragraphs (1) to (3);