



DAVID Y. IGE
GOVERNOR

MIKE MCCARTNEY
DIRECTOR

DEPARTMENT OF BUSINESS, ECONOMIC DEVELOPMENT & TOURISM

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Statement of
MIKE MCCARTNEY
Director
Department of Business, Economic Development and Tourism
before the
SENATE COMMITTEE ON WATER AND LAND
AND
SENATE COMMITTEE ON ENERGY, ECONOMIC DEVELOPMENT, AND TOURISM

Wednesday, March 13, 2019
1:15 PM
State Capitol, Conference Room 229

in consideration of
HB 593, HD1
RELATED TO LAND USE.

Chairs Kahele and Wakai, Vice Chairs Keith-Agaran and Taniguchi, and Members of the Committees.

The Department of Business, Economic Development, and Tourism (DBEDT) has **comments** on HB 593, HD1, which authorizes the development of utility scale solar development projects in the State Agricultural District with classified A soils subject to certain conditions set forth in this measure.

Achieving 100% renewable energy by 2045 will likely require the development of numerous 'utility-scale' solar energy projects that prefer large areas of flat sunny land. Currently, six large solar projects are being constructed or planned on Oahu on parcels partially or fully within the State Agricultural District. Balanced land use policies in Hawaii can help ensure sufficient land is available for energy, agriculture, and other needs.

Should the Legislature consider allowing the development of large solar farms in the State Agricultural District with classified A soils, the conditions proffered in this bill may offer some reasonable mechanisms to reduce transmission infrastructure needs and allow for such projects to proceed while potentially minimizing negative impacts to Hawaii's agricultural industry. DBEDT defers to the appropriate agencies for comment.

Thank you for the opportunity to offer these comments.

DAVID Y. IGE
Governor

JOSH GREEN
Lt. Governor



PHYLLIS SHIMABUKURO-GEISER
Chairperson, Board of Agriculture

State of Hawaii
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**TESTIMONY OF PHYLLIS SHIMABUKURO-GEISER
CHAIRPERSON, BOARD OF AGRICULTURE**

**BEFORE THE SENATE COMMITTEES ON WATER & LAND, AND ENERGY,
ECONOMIC DEVELOPMENT, & TOURISM**

**MARCH 13, 2019
1:15 P.M.
CONFERENCE ROOM 229**

**HOUSE BILL NO. 593 HD1
RELATING TO LAND USE**

Chairpersons Kahele and Wakai and Members of the Committees:

Thank you for the opportunity to testify on House Bill 593 HD1 that authorizes the development of utility-scale solar energy projects on “A” rated agricultural land in the Agricultural District. HD1 attempts to reduce the impact of solar energy facilities that displace farmers who are actively cultivating “A” rated agricultural lands. However, given the high crop production capacity and extreme scarcity of ‘A” rated agricultural lands, and our uncertainty as to what the full impact of these facilities will have on these irreplaceable agricultural lands, we remain in strong opposition to allowing solar energy facilities on “A” rated agricultural lands.

DOA has always sought a balance between the State’s initiatives for energy and food self-sufficiency. We have seen fast adoption of and broad support for renewable energy production at the utility-scale to the residential. In our earlier testimony on HB 593, we noted that over the past ten years, piecemeal amendments to Chapter 205 have allowed solar energy facilities to dramatically increase their footprint on Hawaii’s agricultural lands. As this occurred, we argued that solar energy facilities should first be directed to lower-rated “D” and “E” rated lands, which are found in abundance on each island, before using “B” and “C” rated agricultural land.



Now, House Bill 593 HD1 seeks to allow solar energy facilities on “A” rated agricultural land. “A” rated agricultural lands have the highest capacity for intensive, soil-based, agricultural production with the least amount of inputs and preparation. Simply put, it is Hawaii’s best agricultural land. And it is very scarce. In earlier testimony, it was noted that “A” rated ag lands comprise 3% or about 56,000 acres of the 1.83 million acres of agricultural zoned land throughout the State. Oahu has about 15,000 acres of “A” rated ag land, or about 25% of the State total. Nearly all the “A” rated agricultural lands from Wahiawa and Schofield Barracks southward to the residential communities of Royal Kunia and Village Park are in intensive agricultural production and much of it is irrigated.

HD1 asserts it would further the agricultural use of the “A” rated agricultural land occupied by or near to a solar energy facility (page 1, lines 8-9). The bill indicates the following three benefits to agricultural use on or near a solar energy facility on “A” rated agricultural lands. We find these benefits to contain vague language with no guarantees. We offer comments for each:

1. A reduction in land lease rate to 60% from the existing 50% below the fair market lease rate (page 17, line 11-15).

We do not see the significance of the benefit of an additional 10% reduction in land lease rent to a farmer on or near a solar energy facility on “A” rated agricultural land, particularly in the case where the agricultural operation is being largely or totally displaced by the solar energy facility. Farm displacement that results in a reduction in or total loss of production acreage cannot be made up by a reduction in land lease rate.

2. Requiring the solar energy facility operator to “provide water infrastructure to any service area” where agricultural production has been impacted by the solar energy facilities (page 19, lines 11-15).

The provision of “water infrastructure to any service area in which agricultural production has been impacted” needs to be reworded as it lacks clarity. The phrase “agricultural production has been impacted” appears to describe the situation where a farming operation on a parcel of land is being largely, if not entirely, displaced by a solar energy facility and that the farmer is forced to relocate the farming operation to another portion of the same parcel, or to another parcel. Providing “water infrastructure to any service area” for a farm that is forced to operate on a much smaller land area on the same parcel, or, worse, forced to leave the parcel will not return the farm to its prior crop production capacity anytime soon. As worded, this is a weak benefit.

3. Requiring one or more binding contracts for farmers to undertake agricultural activities on the “A” rated land area used for solar energy facilities and requires facility operators to “provide for the electrical needs” of these contracted farmers (page 20, lines 5-13).

Under this scenario, a solar energy facility operator on “A” rated agricultural land is required to “provide for the electrical needs” of a farmer or farmers who enter into “binding contracts” with the operator. The phrases “binding contracts” and “provide for the electrical needs” need to be reworded as they lack clarity. Are there examples of other solar energy facilities in Hawaii that have established “binding contracts” with farmers to undertake agricultural activities under or alongside the solar energy facility footprint? It is not clear how this “benefit” will relate to the other two.

The bill has three limits on solar energy facilities. One is the 35-year cap on the use of the land, another is the 2-mile capture area on both sides of a 138-kilovolt transmission line right-of-way, and the third is the area of “A” rated agricultural land in a county that may be developed for solar energy facilities is limited to 1% of the total acreage of “A” rated agricultural land in the county. We are not confident these limits will withstand future efforts to benefit solar energy facility development at the cost of agricultural production on “A” rated agricultural land. We are worried about the ‘slippery

slope' effect as the State has seen over the past several years where solar energy facilities were being considered for "D" and "E" lands and today we are considering "A" lands.

The 35-year cap on use of "A" rated agricultural land for a solar energy facility is not fixed and can be extended by the Land Use Commission. Given the far higher income stream possible from leasing agricultural land for solar energy facility development versus agricultural production, we are not convinced that affected "A" rated agricultural land will ever be returned and restored to its original pre-use condition for agricultural use (page 19, lines 1-7 and 16-21).

The bill establishes a geographic limitation on what "A" rated agricultural land can be taken for solar energy facility development – two miles, either side, of a 138-kilovolt transmission line right-of-way (page 18, lines 17-20). To our knowledge, only Oahu has transmission line rights-of-way that cross over "A" rated agricultural land, one of which crosses the Kunia Road in the midst of agricultural lands almost entirely under agricultural production. We are very concerned that the 138-kilovolt limitation will be subject to amendment in the future, perhaps down to 69-kilovolt, thereby increasing the area where solar energy facilities may be developed, particularly on the neighbor islands.

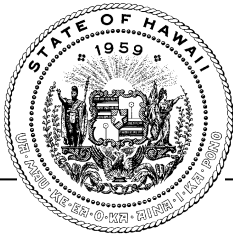
The bill also limits the total area of "A" rated agricultural lands directly under the footprint of solar energy facilities to 1% of the total acreage of "A" rated agricultural lands in the relevant county (page 22, lines 1-10). For Oahu, 1% of 15,000 acres of "A" rated lands is 150 acres. So, a single utility-scale solar energy facility, built within the 138-kilovolt transmission line right-of-way described in the previous paragraph, will extinguish consideration of other solar energy facility proposals on "A" rated agricultural lands for Oahu. This brings into question who will benefit from this narrowly defined legislation. We are very concerned that this 1% cap will be increased in the future, thereby increasing the amount of "A" rated agricultural land that will be subject to solar energy facility development.

The bill specifies 5 standards and criteria for the Land Use Commission to consider in their review of a special use permit for solar energy facilities on “A” rated agricultural lands. Most of the standards/criteria contain imprecise language that may make measurement of impact difficult (page 20, line 14 to page 21, line 20).

In lieu of this measure, the Department strongly recommends that the development of solar energy facilities on “A” rated Agricultural District land be sought through established land use entitlement and county plan amendment processes under the purview of the Land Use Commission and the counties. We strongly discourage circumventing these existing processes by amendments to Chapter 205, particularly for the very scarce and valuable “A” rated agricultural land that these laws and ordinances ultimately seek to protect and conserve.

Despite our strong opposition, we are open to further discussion on solar energy facilities on “A” rated agricultural land, provided the utility-scale solar energy facility developer undertakes and completes a “proof of concept” that, to the State’s satisfaction, unequivocally demonstrates that agricultural production activity shall be the primary activity on the parcel of land for which a solar energy facility is proposed; that the amount of agricultural crop production by volume, weight, and value shall be equal to or exceeds what is possible without the solar energy facility; that all crop types shall be tested, including papaya and banana, except livestock; if agricultural-technology production is proposed by the solar energy facility developer, a full cost itemization of the full development of the infrastructure to allow agricultural-technology production in coexistence with solar energy facilities, including greenhouse buildings and vertical agriculture, the cost of operating and maintaining agricultural technology production, the cost to acquire the skills to operate an agricultural technology production system, and other considerations. A successful proof-of-concept would clearly demonstrate the solar energy facilities and intensive and economically viable agricultural production can physically co-exist on the same land area.

Thank you for the opportunity to comment on this bill.



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Statement of
RODNEY FUNAKOSHI
Planning Program Administrator, Office of Planning
before the
**SENATE COMMITTEES ON WATER AND LAND AND
ENERGY, ECONOMIC DEVELOPMENT, AND TOURISM**

Wednesday, March 13, 2019

1:15 PM

State Capitol, Conference Room 229

in consideration of
HB 593, HD 1
RELATING TO LAND USE.

Chairs Kahele and Wakai, Vice Chairs Keith-Agaran and Taniguchi, and Members of the Senate Committees on Water and Land and Energy, Economic Development, and Tourism,

The Office of Planning (OP) respectfully **opposes** HB 593, HD 1, which would amend Hawaii Revised Statutes (HRS) §205-2 to allow solar energy facilities on lands classified by the Land Study Bureau's (LSB) as "A" rated lands. HB 593, HD1 provides that A-rated lands proposed for solar energy facilities are subject to a State Special Permit, with added restrictions including location within two miles of a 138kV transmission line, exclusion from State lands, providing water infrastructure for any agricultural production impacted, and binding contracts for agricultural use including supplying electrical power. HD 1 proposes additional requirements that the Land Use Commission (LUC) find de novo that any agricultural activity on the site will be enhanced or supported by the solar facility, and consider fragmentation, food security and resiliency goals, impacts on surrounding lands, and that the total area of A lands containing solar facilities shall not exceed one (1) percent of total lands within that county.

While recognizing that solar energy facilities provide an important source of renewable clean energy, OP is concerned that their allowance on the most productive agricultural lands in the State could seriously impair the State's long-term agricultural productivity. An ample supply of lands is available elsewhere in the Agricultural District without using A lands.

State agricultural interests are embodied in Article XI of the Hawaii State Constitution and HRS § 205-41 requiring that the State shall conserve and protect agricultural lands and assure the availability of agriculturally suitable lands. Unless planned for urban growth by the county, we believe these highly productive lands should remain available for agricultural production in the interests of agricultural food security and self-sufficiency.

The Land Study Bureau's overall productivity ratings range from "A" (very good) to "E" (very poor/not suitable). Statewide, A-rated lands constitute only three (3) percent, or 55,800 acres, of the 1,885,100 acres of lands within the State Agricultural Land Use District. In 2014, a statutory amendment allowed solar energy facilities on B and C rated lands, previously restricted to 10 percent or 20 acres, to be granted by special use permits regardless of acreage. This leaves A-rated lands, with the most highly productive soils, as the only protected class from the development of utility scale solar facilities.

OP acknowledges the HB 593, HD 1 amendments which include additional requirements to approve a Special Permit for solar facilities on A rated lands. However, the amendments would fundamentally alter the framework of the Special Permit process, which is a county-based approval, with county planning commissions empowered to permit and determine "unusual and reasonable" uses. If more than 15 acres, LUC approval is also required, but the LUC review is currently limited to the record established at the county level.

Given the limited supply of A-rated lands, the available and more appropriate vehicle for permitting solar facilities on these lands is through the State Land Use District Boundary Amendment process, whereby the LUC via a petition for reclassification can determine the uses to which the lands are best suited, balancing energy and agriculture goals, and reclassify the lands to the Urban or Rural District if deemed appropriate.

Thank you for this opportunity to testify.



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March 13, 2019

HEARING BEFORE THE
SENATE COMMITTEE ON WATER AND LAND
SENATE ON ENERGY, ECONOMIC DEVELOPMENT, AND TOURISM

TESTIMONY ON HB 593, HD1
RELATING TO LAND USE

Room 308
1:30 PM

Aloha Chairs Kahele and Wakai, Vice Chairs Keith-Agaran and Taniguchi, and Members of the Committees:

I am Brian Miyamoto, Executive Director of the Hawaii Farm Bureau (HFB). Organized since 1948, the HFB is comprised of 1,900 farm family members statewide and serves as Hawaii's voice of agriculture to protect, advocate and advance the social, economic and educational interests of our diverse agricultural community.

The Hawaii Farm Bureau strongly opposes HB 593, HD1. We are concerned about the loss of Hawaii's farmland. This bill will allow the development of utility-scale solar projects on lands classified as having the highest productivity soil in the State. This is in conflict with our state's goal of food sustainability.

Nationwide, there is an ongoing struggle between solar developers and farmers. Land that is best for solar installations are often lands needed to grow crops or raise animals. The ideal tract of land for solar development is flat, dry, unshaded, close to transmission infrastructure and customers, accessible to installers and maintenance, and in an area with plenty of sunshine. All of these characteristics are associated with farmland. Prime farmland may be particularly attractive for solar development.

When a piece of land is developed for a solar installation, it is very unlikely to be reverted back to agricultural land, even when the lease to a solar company eventually runs out. Flattening and compacting the land, as well as other changes, tend to ruin the land for future farming. Rising demand for solar energy could swallow up huge swaths of farmland as struggling farmers may be coerced into selling or leasing to these developments. This is because leasing land for solar development can be more profitable, per acre, than producing any crop. Furthermore, the consistent revenue stream from solar leases may

be an attractive alternative to the typical risks that farmers take to produce food; i.e. insects, diseases, floods, drought, fickle market, transportation costs, etc.

Acknowledging this potential crisis, some states and counties have banned new solar developments on agricultural lands. Others have implemented strict policies such as tax penalties and permit hurdles to ensure no, or minimal impact to farmland. In some states, the state Department of Agriculture must certify that the project will not materially affect the status of any prime farmland. California, the national leader in both solar production and crop sales, imposes an expensive conversion penalty for converting farmland to solar. California policy is to favor solar development on “land that is not valuable habitat, open space, or farmland.”

Currently, Hawaii law allows solar development on B, C, D, or E classified land. The Hawaii Farm Bureau believes that allowing solar energy facility development on A classified lands, as proposed in HB 593, HD1 may be harmful to agriculture in Hawaii.

Thank you for the opportunity to testify on this measure.



Email: communications@ulupono.com

SENATE COMMITTEES ON WATER & LAND AND ENERGY, ECONOMIC DEVELOPMENT, AND
TOURISM

Wednesday, March 13, 2019 — 1:15 p.m. — Room 229

Ulupono Initiative has Comments on HB 593 HD 1, Relating to Land Use

Dear Chair Kahele, Vice Chair Keith-Agaran, Chair Wakai, Vice Chair Taniguchi, and Members of the Committees:

My name is Murray Clay and I am Managing Partner of Ulupono Initiative, a Hawai'i-based impact investment firm that strives to improve the quality of life for the people of Hawai'i by working toward solutions that create more locally produced food; increase affordable, clean, renewable energy; and better manage waste and fresh water resources. Ulupono believes that self-sufficiency is essential to our future prosperity and will help shape a future where economic progress and mission-focused impact can work hand in hand.

Ulupono has comments on HB 593 HD 1, which authorizes the development of utility-scale solar development on certain lands.

Ulupono actively supports both the agriculture and renewable energy industries in Hawai'i, but sometimes those industries come into conflict. This bill authorizes utility-scale solar development on prime agricultural lands. However, we have concerns over using prime agricultural lands for non-agricultural uses. Although this bill is written to favor of a particular project on a limited geographic area for a finite timeframe, its passage could encourage other solar developers to push for development on prime agricultural lands.

Ulupono would be open to supporting solar development on Class A lands if a significant portion of the power output were being sold to, discounted for, or donated to an agricultural enterprise. We would also want the agricultural enterprise to actually use the power (or services that use the power such as water pumping). We would want the solar developer to be required to actively partner with local farmers/producers in a meaningful way.

As Hawai'i's issues become increasingly complex and challenging, we appreciate these committees' efforts to look at policies that improve the quality of life for the people of Hawai'i. Thank you for this opportunity to testify.

Respectfully,

Murray Clay
Managing Partner

Investing in a Sustainable Hawai'i



COMMITTEE ON WATER AND LAND
COMMITTEE ON ENERGY, ECONOMIC DEVELOPMENT AND TOURISM

HB593 HD1 RELATING TO LAND USE

Chairs Kahele, Wakai, Vice Chairs Keith-Agaran, Taniguchi and members of the committees,

DESCRIPTION:

TESTIMONY: We strongly support HB59 HD1

The Hawaii Clean Power Alliance (HCPA) is a nonprofit association organized to advance the development and sustainability of clean energy in Hawaii. Our mission is to educate the public about the benefits of clean energy, and to support Hawaii's policy goal of 100% renewable portfolio standard by 2045. We support distributed energy on rooftops, but even with all rooftops, Hawaii will fall short of its 100% goal. The benefits of clean, utility scale, grid connected energy projects are numerous, including reducing Hawaii's dependence on fossil fuels, lowering carbon emissions, and providing stable, multi-year long-term rates, which are passed on to rate payers. In addition, grid-connected clean power assists the income-challenged and the over 50% of our population who rent and cannot put solar on their rooftop. Businesses can also benefit, especially farmers, who suffer from a high cost of electricity with their operations. We feel of equal importance is the balance of Hawaii's need to support the goal of providing more locally grown food, in order to wean ourselves of the import of expensive, especially perishable food items.

Hawaii is at a policy crossroad, as we find it increasingly necessary to solve the sometimes seemingly contradictory goals of increasing renewable energy production, increasing food production and increasing affordable housing. Each vie for scarce resources such as land, water and human capital. This bill can help to take away those silos and solve the problem of deciding one over the other by creating a meaningful and symbiotic partnership between two industries.

In the energy sector, there is a real time-bound deadline to get more megawatts developed on the grid because federal tax incentives are scheduled to decrease substantially in 2022. These tax incentives are a pass-through savings to ratepayers and is proposed to provide the lowest cost of energy ever seen in the state. Fortunately, the use of technology has enabled advancements to help increase the production of energy, while decreasing the physical footprint.

The same is occurring with technology in agriculture. With more being done in smart data analysis, vertical farming, innovative greenhouses, warehouse farming, aeroponics, aquaponics



and hydroponics, farmers can now increase yields in a sustainable way. There are examples of innovation in farming right here in Hawaii, which help to control environmental and pest risks, but also help to lower the use and therefore cost of water. However, these facilities take more and more energy to run. There are numerous examples across the U.S. such as AeroFarms in New Jersey which delivers up to 30 harvests vs. 3 harvests from a traditional farm: <https://aerofarms.com/>. The Netherlands made a national commitment to sustainable agriculture under the rallying cry **"Twice as much food using half as many resources."** They lack many of the resources thought to be needed for large-scale agriculture – land, and water, but they do have great energy resources (geothermal). Utilizing warehouses and greenhouses, this small land-mass country has become a top exporter of food.

We support HB593 HD1 because it helps to solve the competing land use by making sure that solar co-exists with agriculture in a significant way.

Some of the benefits we see for the state and farmers include:

Lower energy prices, energy security, reliability, decreased carbon footprint

- By increasing our own production of renewable fuel, we become a more resilient state, without being dependent on external imports, thereby increasing our energy security, and reliability while decreasing our carbon footprint.
- For farmers, as well as businesses and households, the current cost of energy is one of the highest expenses in their monthly expenditures and can make the difference between profitability or loss. Farmers are dependent on energy to power their operations, for example, processing, chillers and wells.
- In fact there are numerous bills this legislative body is proposing to promote special rates for protected agriculture.

Long term protection of AG land LSB A for years to come (no housing)

- Solar will protect the use of the land for 35 years, at which point the owner must go to LUC for extension or removal and it will guarantee to return to the same condition and to sole use of agriculture.
- Provides time for the state and counties to create a master plan and policies to insure LSB A lands are not populated with housing, which can be abused today via the CPR and subdivision process, with no oversight or regulation by government entities.
 - In fact there are numerous bills this legislative body is proposing to solve the misuse of condominium property regimes.
- This will enable the state to control the use criteria on private lands.
- The LUC will have oversight and impose conditions on the land use.

-



Co-exist with agriculture

- An applicant must go before LUC no matter what size of project, so the LUC will insure that agriculture is being balanced with the energy project.
- An applicant must provide water infrastructure to the farmer.
- The solar partner will leave any infrastructure that is provided and beneficial to the farmer when PV farm exits.
- In fact there are numerous bills this legislative body is proposing to promote vertical farming.

Food Safety Benefits

- Of concern to farmers, regulatory bodies and the retailers and restaurateurs who purchase the food are The Federal Information Security Management Act (FISMA) compliance standards. By co-locating with a solar farm, there may be added benefits such as reduced cost of power for farming, wells, expensive chilling and drying operations.

Limiting the risks of populating all the LSB A lands in the state

- The bill limits the partnerships in LSB A designated lands to only 2 miles within a 138 KV line, built prior to January 1, 2016
- There is a limited percentage of LSB A land that can be utilized in this scenario
- The bill sunsets in 6/30/2025
- We see this as a way to help create an innovative, symbiotic partnership leveraging technology and business partners who bring needed assets to the equation of land, capital and human capital.

We urge you to pass HB593 HD1.

Thank you for the opportunity to testify.



SIERRA CLUB OF HAWAI'I

MĀLAMA I KA HONUA. *Cherish the Earth.*

SENATE COMMITTEE ON WATER AND LAND

SENATE COMMITTEE ON ENERGY, ECONOMIC DEVELOPMENT, AND TOURISM

March 13, 2019 1:15 PM Room 229

In OPPOSITION of HB 593, HD1: Relating to Land Use

Aloha Chair Kahele, Chair Wakai, and members of the committees,

On behalf of our 20,000 members and supporters, the Sierra Club of Hawai'i **opposes HB 593, HD1**, which authorizes the development of utility scale solar projects on "A" rated agricultural lands, subject to certain requirements.

This bill has become more complex with its various amendments, but at its core it puts into conflict two very important environmental issues - Hawai'i's ability to wean off fossil fuels and transition to a clean energy future versus our ability to boost local food production. The Sierra Club supports renewable energy, but we have serious, overriding concerns to allow large-scale solar production on Hawai'i's most fertile and productive "A" rated agricultural lands. "A" ag lands constitute a mere 3% of the total land designated for agriculture and utility-scale solar is already authorized on ag lands rated B, C, D, and E. We believe there is ample opportunity to support solar in conjunction with local food production without passage of this bill.

Furthermore, HB 593 HD1 is restrictive and favors 1 particular project to be authorized in building a 52 MW utility scale solar project on 180 acres in Kunia, O'ahu. This calls into question whether the legislature would be passing special legislation in favor of this development proposal. We also note that nearly all of the A lands in this area are currently in intensive agricultural production and much of this land is already irrigated.

Thank you for the opportunity to provide testimony in **opposition to HB 593 HD1**.

Mahalo,

Jodi Malinoski, Policy Advocate



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March 12, 2019

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State President

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Yuri Zhuraw
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John Dobovan
Haleakala, Maui

Ray Maki
Kauai

Dash Kuhr
Kohola, Hawai'i

Maureen Datta
Kona, Hawai'i

Kaipo Kekona
Lahaina, Maui

Robert Pahia
Mauna Kahalawai,
Maui

Brynn Foster
North Shore, Oahu

Steve Lund
Puna, Hawai'i

Christian
Zuckerman
Wai'anae, Oahu

James McCay
Waimanalo,
Oahu

TESTIMONY OF HAWAII FARMERS UNION UNITED (HFUU)
IN STRONG OPPOSITION TO HB 593 HD1 (RELATING TO LAND USE)
BEFORE THE SENATE COMMITTEE ON WATER AND LAND AND THE COMMITTEE ON
ENERGY, ECONOMIC DEVELOPMENT AND TOURISM
(MARCH 13, 2019 AT 1:15PM)

Aloha Chairman Kahele, Chairman Wakai and Committee Members,

HFUU is a 501(c)(5) agricultural advocacy, nonprofit representing over 1,500 family farmers and their supporters organized as 12 Chapters in all four Hawai'i Counties. We support both agriculture and renewable energy, but this Bill pits these two worthy goals against each other—is bad policy. HFUU understands that we need open space for large-scale photo voltaic power production, but heretofore Class “A” agricultural lands have been excluded from solar farm development. That is still the correct “balance” for these two worthy policies.

Hawai'i has an infinite supply of sunshine, but a limited supply of Class “A” ag land, and while we have plenty of sunshine we still have to import nearly 90% of our food. HFUU represents primarily family farmers and their supporters, but whether you are a large producer or small we will never get close to food self-sufficiency if we continue to take Class “A” ag lands out of production (most likely permanently) to produce power—or anything else. Our most valuable and productive ag lands should be for agriculture period.

We hear the argument that there are plenty of ag lands laying fallow. That is a false justification of the use of “A” lands and we will not support those who are not making a living at farming making decisions for those that do, in using such a reference. Our farming community needs the canvas to paint on so to speak and our “A” lands are the best canvas we have to suppling our state with nutrient rich food for our people.

Some efforts have been made in the legislative process to make this Bill more palatable. These amendments might slow permitting of PV on Class “A” ag land, but a slow death to agriculture is just as objectionable as a fast one. HFUU recognizes that some ag lands may be needed for PV production, we do not believe, however, that it should be our *best* ag land.

In a prior hearing one of our members submitted a rote statement in “support” of this Bill and identified themselves as speaking for HFUU. Our members are, of course, entitled to their own opinions and this one may have been due to a misstatement on our website. As HFUU's President, however, I am its spokesperson. We strongly oppose this legislation and hope you will too.

Mahalo nui loa,
HAWAII FARMERS UNION UNITED

Vincent Mina, President

The Hawai'i Farmers Union United and its Chapters are a nonprofit corporation formed under Hawai'i law and Section 501(c)(5) of the Internal Revenue Code. HFUU advocates for the sovereign right of farmers to create and sustain vibrant and prosperous agricultural communities for the benefit of all Hawai'i through cooperation, education and legislation. Because HFUU is an agricultural advocacy organization, donations to it are not tax deductible



Hawaii Cattlemen's Council, Inc.

COMMITTEE ON WATER AND LAND

Senator Kaiali'i Kahele, Chair | Senator Gilbert S.C. Keith-Agaran, Vice Chair

COMMITTEE ON ENERGY, ECONOMIC DEVELOPMENT, AND TOURISM

Senator Glenn Wakai, Chair | Senator Brian T. Taniguchi, Vice Chair

DATE: Wednesday, March 13, 2019
TIME: 1:15 P.M.
PLACE: Conference Room 229

HB 593, HD1 – RELATING TO LAND USE

Appropriates funds to the Department of Land and Natural Resources to study and combat rapid ohia death.

Chairs Kahele & Wakai, Vice Chairs Keith-Agaran & Taniguchi, and Members of the Committees:

My name is Dale Sandlin, and I am Managing Director of the Hawaii Cattlemen's Council. The Hawaii Cattlemen's Council, Inc. (HCC) is the Statewide umbrella organization comprised of the four county level Cattlemen's Associations. Our 150+ member ranchers represent over 60,000 head of beef cows; more than 75% of all the beef cows in the State. Ranchers are the stewards of approximately 25% of the State's total land mass.

The Hawaii Cattlemen's Council **strongly opposes** HB 593, HD1 as this measure could lead to the loss of agricultural lands.

While the ranching industry in Hawaii has few Class A ag lands, this measure would cause the potential loss of available agricultural land for active production. The shift of the use of these lands to allow for solar power may help our state's energy production, but will hinder our state's food security.

Agricultural land has become the easy target for development due to it's low-cost potential for construction. These lands have been cleared of dense vegetation, rocks and often already have extensive infrastructure for water already installed. Solar power development, usually limits the viability of the land and specific restrictions are placed on the land for livestock use. Utilizing ag lands for an ag production is best as these lands can be used for multiple crops, including grazing for livestock, each year. Once solar is installed, it's a single-use proposition.

Losing these productive lands to development, even solar power, is not the direction we should go if we expect to meet the Governor's goal of doubling food production. We respectfully ask for this committee to defer this measure and we appreciate the opportunity to provide testimony in this matter.





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TESTIMONY FROM BENNETTE MISALUCHA, EXECUTIVE DIRECTOR

In Opposition of HB593, HD1
Relating to Land Use

SENATE COMMITTEE ON WATER AND LAND
SENATE COMMITTEE ON ENERGY, ECONOMIC DEVELOPMENT AND
TOURISM

March 13, 2019, 1:15 p.m.
Conference Room 229

Chairs Kahele and Wakai and members of the committees:

The Hawaii Crop Improvement Association (HCIA) opposes HB593, HD1, which authorizes the development of utility scale solar development projects on certain lands.

Currently, Hawaii law allows for solar development projects on B, C, D and E classified lands. Extending these developments on A classified land would be devastating to agriculture in Hawaii.

When a piece of land is developed for a solar installation, it is unlikely it will ever revert back to agricultural use, even when the solar lease runs out. That's because changes to the land tend to ruin it for future farming. Additionally, increased demand for solar energy could result in acres of farmland being leased to solar developers, as it can be more profitable for farmers than producing any crop.

All of this is counterintuitive to the state's goal to double local food production by 2020. As such, HCIA respectfully requests that this committee oppose HB593, HD1 to keep prime agricultural lands in agriculture.

Mahalo for your time and consideration.

Respectfully,

Bennette Misalucha
Executive Director, Hawaii Crop Improvement Association



HAWAII CROP IMPROVEMENT ASSOCIATION

The Hawaii Crop Improvement Association is a Hawaii-based non-profit organization that promotes modern agriculture to help farmers and communities succeed. Through education, collaboration, and advocacy, we work to ensure a safe and sustainable food supply, support responsible farming practices, and build a healthy economy.

HB-593-HD-1

Submitted on: 3/12/2019 11:49:25 AM

Testimony for WTL on 3/13/2019 1:15:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Lehn Huff	Testifying for Maui School Garden Network	Oppose	No

Comments:



Hawaii Interfaith Power & Light (HIPL)

An Interfaith Response to Climate Change

To: Water and Land (WTL) and Energy, Economic Development, and Tourism (EET)

From: Hawaii Interfaith Power & Light (HIPL)

Date: Wednesday, March 13, 2019, 1:15 PM

Place: Conference Room 229, State Capitol, 415 South Beretania Street

Re: Opposition to HB593 HD1, Relating to Land Use.

Aloha e Chairs Kahele and Wakai, Vice Chairs Keith-Agaran and Taniguchi, and WTL and EET Members,

My name is Steve Lohse, I'm an environmental scientist and Legislative Liaison for Hawaii Interfaith Power & Light (HIPL). On behalf of HIPL, thank you for this opportunity to submit written testimony in **Opposition to HB593 HD1.**

HIPL opposes the development of utility-scale solar projects on prime ag lands, those with soil classified as overall productivity rating class A.

Hawaii needs sustainable renewable energy, and solar is critical to filling this need. Hawaii also needs sustainable local food production, and prime ag lands are critical to filling this need. Hawaii needs BOTH energy and food sustainability, not one or the other.

Let's think whole about our Island context and about social, economic, and environmental equity. Let's avoid creating unnecessary and *unsustainable* land-use conflict between energy OR food. Please, let's not develop anything except food production on prime ag lands!

Please, defer HB593 HD1. Thank you!

Aloha no,

Steve Lohse

Hawaii Interfaith Power & Light (HIPL)

lohse@hawaii.edu

<https://hipl.org/>

HIPL embraces the following goals to connect our interfaith, decision-making, and advocacy communities in Hawaii's historic transition ASAP to 100% renewable energy and a carbon-neutral economy:

- *raise awareness of the deeply spiritual nature of energy and climate challenges;*
- *advocate energy policies that promote conservation, efficiency, and renewables;*
- *provide inspiration, resources, leadership, and education for effective community action.*

HB-593-HD-1

Submitted on: 3/10/2019 5:38:14 PM

Testimony for WTL on 3/13/2019 1:15:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Janet Graham	Testifying for 350.org	Oppose	No

Comments:

This bill would allow the most productive ag land in the state to be covered with solar panels. Solar is an indispensable part of our clean energy plans, but there are a 1,000 other places to put it. We need that great soil to reduce our dependence on imported food, which will increase our security, keep money in the state, and avoid the greenhouse gases emitted by shipping it in. Don't sacrifice Grade A land for no good reason.

HB593 is very misguided policy. Look at the bigger picture and defer it



To: The Senate Committee on Water and Land
and
The Senate Committee on Energy, Economic Development, and Tourism
From: Sherry Pollack, 350Hawaii.org
Date: Wednesday, 3/13/19

In strong opposition to HB593 HD1

Aloha Chairs Kahele and Wakai, Vice Chairs Keith-Agaran and Taniguchi, and members of the WTL and EET committees,

I am Co-Founder of the Hawaii chapter of 350.org, the largest international organization dedicated to fighting climate change. On behalf of our 6,000 members and supporters, 350Hawaii.org **strongly opposes HB593 HD1**.

This bill would allow the most productive ag land in the state to be covered with solar panels. Solar is an indispensable part of our clean energy plans, but there are thousands of other places to put it. We need that great soil to reduce our dependence on imported food, which will increase our security, keep money in the state, and avoid the greenhouse gases emitted by shipping it in. Don't sacrifice Grade A land for no good reason.

HB593 is very misguided policy. Look at the bigger picture and defer it.

Thank you for the opportunity to testify.
Sherry Pollack
Co-Founder, 350Hawaii.org

LATE



300 Kuulei Rd. Unit A #281 * Kailua, HI 96734 * Phone/Fax (808) 262-0682 E-Mail: htff3000@gmail.com

March 13, 2019

COMMITTEE ON WATER AND LAND

COMMITTEE ON ENERGY, ECONOMIC DEVELOPMENT, AND TOURISM

HB 593, HD1
RELATING TO LAND USE

Aloha Chairs Kahele and Wakai, Vice Chairs Keith-Agaran and Taniguchi and Committee Members;

Hawaii's Thousand Friends (HTF), a non-profit statewide organization dedicated to ensuring that land use planning and decisions protect the environment, human health and natural and cultural resources, *opposes* HB 593 HD1 that authorizes the development of utility scale solar projects on prime agricultural land.

Hawaii's State Constitution Article XI requires the State to "...conserve and protect agricultural lands, promote diversified agriculture, increase agricultural self-sufficiency and assure the availability of agriculturally suitable land."

No agricultural land is more suitable for farming than land given an A rating, the class of highest productivity, by the University of Hawaii's Land Study Bureau Detailed Land Classification.

Under this study all lands in the State, except those in the urban district, were grouped into homogeneous units of land types; their condition and environment were described; lands were rated on over-all quality in terms of agricultural productivity; appraised for performance for selected alternative crops; and delineated the various land types and groups based on soil properties and productivity capabilities.

The narrow description of the proposed solar project leads one to question if this is special legislation. If that is the case it is even more troubling to think that our state's limited high quality agricultural land can be so easily manipulated for non-agricultural.

With only 3% or 55,800 acres out of the states 1,885,100 acres of land in the State Agricultural Land District it is careless and short sighted to allow uses other than farming on A rated land. Help keep agricultural land for farming and hold HB 593 HD1 in committee.



To: The Senate Committees on Water And Land, and
Energy, Economic Development, And Tourism
From: Brodie Lockard, Hawaii State Climate Lead, Organizing for Action
Date: Wednesday, March 13, 2019, 1:15 pm

LATE

In opposition to HB593 HD1

Dear Chairs Kahele and Wakai, Vice Chairs Keith-Agaran and Taniguchi, and Committee Members—

Organizing for Action opposes HB593 HD1.

This bill would allow the most productive ag land in the state to be covered with solar panels. Solar is an indispensable part of our clean energy plans, but there are 1,000 other places to put it.

We need that great soil to reduce our dependence on imported food, which will increase our security and independence; keep money in the state; support our local farmers; and avoid the greenhouse gases emitted by shipping 90% of our food across the ocean. Don't sacrifice Grade A land for no good reason.

HB593 HD1 is very misguided policy. Please look at the bigger picture and defer it.

Thank you for the opportunity to testify.

Brodie Lockard
Hawaii State Climate Lead, Organizing for Action

COMMITTEE ON WATER AND LAND

COMMITTEE ON ENERGY, ECONOMIC DEVELOPMENT AND TOURISM

HB593 HD1 RELATING TO LAND USE

Chairs Kahele, Wakai, Vice Chairs Keith-Agaran, Taniguchi and members of the committees,

DESCRIPTION:

Authorizes the development of utility scale solar development projects on certain lands with agricultural farming

TESTIMONY: I strongly support HB593 HD1.

I am Richard Ha. I am a Vietnam Veteran officer, I have a BS in Accounting, Shidler College Hall of Honor, Distinguished Alumni, University of Hawaii, First chair of Hawaii Island Native Hawaiian Chamber of Commerce. And, I serve on various other non-profit positions. I represent the voice of farmers who are struggling to survive because of the costs of energy, amongst other rising cost inputs.

I have farmed on the Big Island for nearly 40 years, primarily bananas and hydroponic tomatoes in greenhouses where I achieved 10 times the production over traditional farming. We produced nearly 6 million pounds of bananas and 1 million pounds of hydroponic tomatoes annually. Most recently I was the CEO of Medical Cannabis Company Lau Ola. The growing facility was a completely controlled environment. Lights, temperature and humidity were precisely controlled. Several years ago, we installed a 100 KW hydro electric generator on Waia'ama River on our 500 fee simple acre farm, which reduced our cost of energy by 40%. Without this, I would have had a difficult time staying profitable.

Around 2007 we noticed our input costs- plastic, chemicals and fertilizer starting to rise. Since they were petroleum based products, I went to the first of five Association for the Study of Peak Oil conferences. There I learned that the world had been using twice as much oil as it had been finding, for the previous 20 years. By 2009, the new shale oil, horizontal drilling and fracking started increasing production in the US. The characteristic of shale oil was that the wells are small and 90% comes out by four years. Ten years and 70,000 wells later we are about to reach the peak of shale production and prices will start to rise.

Since the 2008 oil spiked to \$147 per barrel, farming became harder. We found it necessary to stop our profit sharing program. Today Hawaii imports 85% of what we eat, petroleum prices will soon start rising again and we need to think about food and energy security in a different way. Greenhouse farming results in a smaller footprint compared to the volume produced and soil and water are less of a requirement.

This way of helping farmers does not require state funds or a tax hike. That's why I like the idea of energy and agriculture helping each other out. I see this measure as both having a symbiotic relationship with each other. Every opportunity to reduce energy costs for the farmer is beneficial.

Please pass HB593 HD1. Thank you for the opportunity to testify.

COMMITTEE ON WATER AND LAND

COMMITTEE ON ENERGY, ECONOMIC DEVELOPMENT AND TOURISM

HB593 HD1 RELATING TO LAND USE

DATE: WEDNESDAY, MARCH 13, 2019
TIME: 1:15 PM
PLACE: Conference Room 220

Chairs Kahele, Wakai, Vice Chairs Keith-Agaran, Taniguchi and members of the committees,

DESCRIPTION:

Authorizes the development of utility scale solar development projects on certain lands with agricultural farming

TESTIMONY: I support HB593 HD1.

I am Jon Wallenstrom and I have spent my career building renewable energy systems and affordable and market-rate housing. I have been very cautious about supporting this bill as I believe that Hawaii needs a farming future. As my involvement in the effort matured and I heard about the problems that farmers have, I have come to learn how easy it is for a renewable energy project to make a meaningful difference in a farmer's ability to succeed and feed our population. I feel wonderfully justified in supporting this bill and I am absolutely certain that we are working to the benefit of the State of Hawaii's short and long-term interests. It took meeting and talking with Dean Okimoto and Richard Ha for me realize that as a society we are protecting land without protecting farmers and without thinking about food yields. Because I am a business-person I understood that we have a competitive disadvantage with California, the Philippines, Chile, etc. but I didn't understand that farming at a scale that is meaningful for our State can happen with simple cooperation and discussion. We can compete with the world and achieve food security we have simply set up a system that impedes our success. I am really encouraged by how this Bill has opened up lines of communication that had not previously existed and I know that we are doing the right thing.

Please pass HB593 HD1 and allow Hawaii to have a future of cooperation and progress.

Thank you for the opportunity to testify.

COMMITTEE ON WATER AND LAND

COMMITTEE ON ENERGY, ECONOMIC DEVELOPMENT AND TOURISM

HB593 HD1 RELATING TO LAND USE

Chairs Kahele, Wakai, Vice Chairs Keith-Agaran, Taniguchi and members of the committees,

POSITION:

Thank you for the opportunity to testify on **HB593 HD1**. **I submit this testimony in strong support**

DESCRIPTION:

Authorizes the development of utility scale solar development projects on certain lands by coexisting with agriculture.

TESTIMONY

I support the entirety of HB593 HD1.

Aloha, my name is **Vincent Kimura** and am **CEO of Smart Yields**. Our mission is to help small to medium-sized farmers grow more with less by providing access to intelligence through smart record-keeping and data-monitoring. We are spreading our technology throughout the islands, and the world, with great success. We have found that farmers face challenges in predicting and dealing with the unpredictability of the environment, and adjusting their management practices to reduce their expenses, and make a profit. Monitoring and recording of data allows better insights and better decisions.

Farmers are subject to many external challenges to produce safe, reliable and continuous agricultural products at cost competitive prices. Farming is not only the oldest industry, but also one that is front and center on the global stage at being at a critical point; large scale, industrial farming does not work. We see the data that substantiates that majority of the world's farmers are small to medium sized. Just in the last 7 years, the USDA reports that we have lost over 101,520 farms and 5.6M acres of farmland net.

Locally and nationally (also globally), farmers are facing a crisis, mental health data (2012) from the CDC shows suicide rate amongst farmers are more than two times higher than our general population. Bringing this back home, Molokai lead the state as having the highest per capita suicide rate, with farmers hanging themselves. A recent article in the Guardian states that "the US farmer suicide crisis echoes a much larger farmer suicide crisis happening globally: an Australian farmer dies by suicide every four days; in the UK, one farmer a week takes his or her

own life; in France, one farmer dies by suicide every two days; in India, more than 270,000 farmers have died by suicide since 1995." (12/11/2018)

The uncontrollable weather, temperature, lack of labor, cost of: infrastructure, water, electricity, mitigating pests, regulatory food safety standards, and security all contribute to the viability or nonprofitability of a farming operation. Farms utilizing agritechnology here and around the world such as greenhouses and data monitoring can provide for much better yields by hedging risk to ensure when a disaster hits, growers have the means to bounce back and fulfil orders.

One key point that I have seen globally, is there is no perfect farm, as there is no silver bullet technology to save farmers. Of the successful farming operations we see, there is an integration of a number of systems and revenue streams to support farmers. Diversified farming operators all have one key point that makes them successful, before that plant or seed is put in the ground, it's spoken for; a term called contract growing. This is a key amongst some of Hawaii's most successful operators.

With almost 800K acres of state agriculture land in Hawaii sitting fallow, I see the integration of energy capture and storage as a way to protect LSB A lands for the long term future. We already have projects in wind and solar on Ag land, so this isn't a new concept. Farms around the world have been integrating renewable energy, with the Dutch leading R&D with greenhouse and indoor production facilities.

Providing farms with renewable infrastructure is obviously very helpful, especially with Hawaii's high kWh electricity costs. Energy farmed from renewable sources on fields, will EMPOWER farmers to increase their resiliency; adding an additional revenue stream and at the same time reducing their cost to grow, harvest, post-harvest, process, and especially store in refrigeration.

This is a way to support farmers and all of the local community.

Thank you for the opportunity to submit my testimony.

Vincent Kimura

CEO, Smart Yields

COMMITTEE ON WATER AND LAND

COMMITTEE ON ENERGY, ECONOMIC DEVELOPMENT AND TOURISM

HB593 HD1 RELATING TO LAND USE

DATE: Wednesday, March 13, 2019
TIME: 1:15 pm
PLACE: Conference Room 229

TESTIMONY OF Kerry Kakazu, MetroGrow Hawaii

Chairs Kahele, Wakai and Members of the Committees:

POSITION: I submit this testimony in strong support

DESCRIPTION:

Authorizes the development of utility scale solar development projects on certain lands with agricultural farming

TESTIMONY

My name is Kerry Kakazu and I am the owner and President of MetroGrow Hawaii, the first vertical farm in the state. Founded in 2013, I have combined my degrees in plant science along with my experiences with technology to create a vegetable farming system that is productive, sustainable and safe. We utilize aeroponic and hydroponic methods along with high efficiency LED lighting in a climate-controlled warehouse to grow quality produce for many of our local restaurants and Foodland Farms stores.

There is a need for protected agriculture as a supplement to traditional growing in order to meet the demand for local vegetable production and to move the state toward food self-sufficiency. Decreases in arable land, increasing weather unpredictability, reduction of fresh water availability and the tremendous pest pressures in Hawai'i necessitate research and development of alternative forms of agriculture. While our operation is able to reduce land, labor, transportation, water, fertilizer and pesticide usage in relation to traditional farms, electricity usage for environmental control is higher. In order to become more economically sustainable we will need to reduce our electricity costs by the incorporation of renewable energy.

The high relative cost of electricity in Hawai'i is a deterrent to profitability for all farms, not just protected agriculture. In addition to environmental control, electricity is needed for other farm equipment, crop processing and post-harvest storage. The co-location of utility scale solar systems with agricultural operations is a sensible, cost-effective means of reducing the energy expenses and increasing the revenue potential of local farms with only a small impact on land usage. In addition, an increase in community solar energy production will be a benefit to all electricity users in the state, not just farmers.

Today's farming industry must work toward utilizing technology and partnerships to be able to have sustainable growth and longevity. By allowing farming and solar energy generation to coexist on LSB A lands, the chances of agriculture thriving in Hawai'i will improve.

Please pass HB593 HD1

Thank you for the opportunity to testify.

COMMITTEE ON WATER AND LAND

COMMITTEE ON ENERGY, ECONOMIC DEVELOPMENT AND TOURISM

HB593 HD1 RELATING TO LAND USE

Chairs Kahele, Wakai, Vice Chairs Keith-Agaran, Taniguchi and members of the committees,

Thank you for the opportunity to testify on **House Bill 593 HD1 I am in strong support of this bill.**

It authorizes the development of utility scale solar development projects on certain lands by co-existing with agriculture.

I am **Dean Okimoto**, formerly President of Nalo Farms, Inc., and I was farming for 35 years in Waimanalo, and shut down my farm in October 2018. I began my farm in 1983, and worked with chefs like Roy Yamaguchi, Alan Wong, Russell Siu and a host of others, at one time servicing about 100 restaurants and outlets. I know the value of branding and having farmers face the public. In 2003, along with Joan Namkoong and Conrad Nonaka, started the first Farmer's Market at KCC and it was sponsored by the Hawaii Farm Bureau, of which I was president of. I have always been active in the community helping non-profit causes and many schools with donations of product as well as making salads to raise money for these causes.

I shut down my operations because of being hit by 4 storms since April, 2018, which wiped out my crops on four separate occasions. Each time my crops were destroyed and I was left without income and trying to support my work force as well as cover expenses. I lost in excess of \$800,000 and am now in a bad financial situation. The issue is that with climate change, farming needs to be done differently, and we must embrace technology, whether it be greenhouse growing to protect from the weather, or other things which can control input costs. With Food safety rules coming into play by the federal Food Safety Modernization Act, farmers have to deal with the added costs that come with it, and one of the largest is refrigeration on site. This cost was in excess of \$10,000/month for us, so PV and solar solutions for farmers is absolutely critical to keep prices down, and for them to make money. This is in addition to rising costs for labor, transportation, fighting pests, and more regulations which farmers must follow, the biggest being food safety.

The reason why I am in favor of this bill, is that we must start melding the energy issues with agriculture in order for the success of agriculture. When it is a scaled solar project like this, there is security measures that must be put in to protect the PV, but this is also a great reason to put agriculture in there also. Since there is security, farmers do not need to have that expense or have homes on the land and their equipment and products are watched over. Farms suffer from thefts of product and equipment, vagrants and vandals.

Having access to lower electricity rates because the PV is renewable and offers a long term stable rate is a huge plus for farmers and the public, as it would be reflected in the cost of the products also.

I also believe that we need to do more greenhouse growing, managing all impacts because of the need to utilize electrical sources to run pumps, lights, and temperature control methods. Greenhouses also

help in pest control environmental impacts, and labor. And therefore provide greater yields on less space.

This measure can be a good example of melding energy efficient methods and cost savings with agriculture as a co-existing partner. This is a win-win for agriculture, solar development, and the public in general. We can actually protect LSB A lands with a project of this size because again the farmer does not have to live on the land. We must protect LSB A lands, but we must also protect the farmer, the other asset in creating local food production. This bill provides for protection of both.

Thank you for the opportunity to submit my testimony.

HB-593-HD-1

Submitted on: 3/10/2019 9:52:47 AM

Testimony for WTL on 3/13/2019 1:15:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Rene Umberger	Individual	Oppose	No

Comments:

HB-593-HD-1

Submitted on: 3/10/2019 10:59:07 AM

Testimony for WTL on 3/13/2019 1:15:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
John NAYLOR	Individual	Oppose	No

Comments:

Aloha,

Solar on roof tops and NOT on our most productive AG land.

HB-593-HD-1

Submitted on: 3/10/2019 5:25:46 PM

Testimony for WTL on 3/13/2019 1:15:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
John Bickel	Individual	Oppose	No

Comments:

I oppose this as we need to support sustainable agriculture. Given the high crop production capacity and extreme scarcity of 'A' rated agricultural lands, and our uncertainty as to what the full impact of these facilities will have on these irreplaceable agricultural lands, I remain in strong opposition to allowing solar energy facilities on "A" rated agricultural lands.

HB-593-HD-1

Submitted on: 3/10/2019 9:18:02 PM

Testimony for WTL on 3/13/2019 1:15:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Janet Pappas	Individual	Oppose	No

Comments:

Please do not allow the installation of solar farms on the most productive agricultural lands in the State of Hawaii.

HB-593-HD-1

Submitted on: 3/10/2019 3:01:18 AM

Testimony for WTL on 3/13/2019 1:15:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Jonathan Boyne	Individual	Oppose	No

Comments:

This bill would allow the most productive ag land in the state to be covered with solar panels. Solar is an indispensable part of our clean energy plans, but there are a 1,000 other places to put it. We need that great soil to reduce our dependence on imported food, which will increase our security, keep money in the state, and avoid the greenhouse gases emitted by shipping it in. Don't sacrifice Grade A land for no good reason.

HB-593-HD-1

Submitted on: 3/11/2019 12:43:36 AM

Testimony for WTL on 3/13/2019 1:15:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Joan Gannon	Individual	Oppose	No

Comments:

To: WTL/EEP Committees

From: Joan Gannon resident Hawaii Island

Re: HB593. I oppose this bill because it would allow the most productive ag land in the state to be covered with solar panels. Please keep good ag land to help us become self sustaining. Use other land for solar panels.

Thank you

HB-593-HD-1

Submitted on: 3/11/2019 1:32:14 PM

Testimony for WTL on 3/13/2019 1:15:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
sally kaye	Individual	Oppose	No

Comments:

HB-593-HD-1

Submitted on: 3/11/2019 1:58:33 PM

Testimony for WTL on 3/13/2019 1:15:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Randy Ching	Individual	Oppose	No

Comments:

Chair Kahele, Vice Chair Keith-Agaran and members of the committee,

I oppose HB593. Our prime ag land (A rated under the ALISH system) is only 3% of ag lands in the state. That A-rated land needs to be used to grow food for local consumption.

We have already re-zoned our best ag lands in the state -- Koa Ridge and Ho'opili on Oahu -- to urban use (i.e. housing). When will this stop? Utility scale solar can be sited at more than one location. It doesn't have to be on A-rated land.

Please defer HB593 HD1. Mahalo for your consideration.

Randy Ching (Honolulu)

HB-593-HD-1

Submitted on: 3/11/2019 12:47:47 PM

Testimony for WTL on 3/13/2019 1:15:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Scott Foster	Individual	Oppose	No

Comments:

Aloha,

HB 593 HD1 would allow solar energy facilities on ag land with a class A productivity rating. Given that Hawaii's food costs are 82% higher than the rest of the U.S. we import 80 to 90% of our food and because of the limited supply of A-rated lands, an applicant should be required to petition the Land Use Commission (LUC) for a Land Use District Boundary Amendment to reclassify land from ag to urban to better fit urban-type uses.

Also, Adding yet another non-farm use to the long list of currently allowed unrelated farm uses accelerates the demise of Hawaii's ag land. Already current permitted uses on ag land are:

- Wind-generated energy production for public, private, and commercial use
- Solar energy facilities on land having productivity ratings B, C, D, or E
- Wind machines and wind farms
- Ag tourism conducted that is accessory and secondary to principal ag use
- Ag tourism including overnight accommodations of 21-days or less
- Geothermal resources exploration and resources development
- Retail food establishment using products grown in Hawaii
- Hydroelectric facilities

Please vote no on HB 593 HD1.

Mahalo.

Scott Foster
Communications Director
Hawaii Advocates For Consumer Rights
808-590-5880

HB-593-HD-1

Submitted on: 3/11/2019 2:58:50 PM

Testimony for WTL on 3/13/2019 1:15:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Robin Kaye	Individual	Oppose	No

Comments:

HB-593-HD-1

Submitted on: 3/11/2019 11:53:42 PM

Testimony for WTL on 3/13/2019 1:15:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Judith Michaels	Individual	Oppose	No

Comments:

HB-593-HD-1

Submitted on: 3/12/2019 10:51:15 AM

Testimony for WTL on 3/13/2019 1:15:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Dale Jensen	Individual	Oppose	No

Comments:

First the Honolulu City Council allowed a housing development on some of the richest ag land in Mililani. Now his bill would allow the most productive ag land in the state to be covered with solar panels. This makes no sense. Solar is an indispensable part of our clean energy plans, but there are a 1,000 other places to put it. We need to preserve our best ag sites to reduce our dependence on imported food, which will increase our security, keep money in the state, and avoid the greenhouse gases emitted by shipping it in. Don't sacrifice Grade A ag land for a solar farm.

HB593 is very misguided policy. Please see that our world is changing and we need to respond by adapting our islands and producing more of what we eat here at home. Please look at the bigger picture and defer this bill.

Sincerely, Dale Jensen, Professional Engineer, Kailua, Oahu.

LATE

HB-593-HD-1

Submitted on: 3/12/2019 3:45:37 PM

Testimony for WTL on 3/13/2019 1:15:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Severine Busquet	Individual	Oppose	No

Comments:

Hi

HB593 is very misguided policy. This bill would allow the most productive ag land in the state to be covered with solar panels. Solar is an indispensable part of our clean energy plans, but there are a 1,000 other places to put it. We need that great soil to reduce our dependence on imported food, which will increase our security, keep money in the state, and avoid the greenhouse gases emitted by shipping it in. Don't sacrifice Grade A land for no good reason.

For these reasons, I oppose HB593.

Thanks for your attention

Severine Busquet

Honolulu, Hi 96825

LATE

HB-593-HD-1

Submitted on: 3/13/2019 8:36:33 AM

Testimony for WTL on 3/13/2019 1:15:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Keith Ranney	Individual	Oppose	No

Comments: