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
HOUSE COMMITTEE ON ENERGY & ENVIRONMENTAL PROTECTION

AND

HOUSE COMMITTEE ON WATER, LAND, & HAWAIIAN AFFAIRS

Tuesday, February 12, 2019
8:55 AM
State Capitol, Conference Room 325

in consideration of
HB 593
RELATED TO LAND USE.

Chairs Lowen and Yamane, Vice Chairs Wildberger and Todd, and Members of the Committees.

The Department of Business, Economic Development, and Tourism (DBEDT) has **comments** on HB 593, which authorizes the development of utility scale solar development projects on certain agriculture lands with A soils subject to the conditions listed in HB 593.

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 on A soils, the conditions proffered in HB 593 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.

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 Energy and Environmental Protection
and
House Committee on Water, Land and Hawaiian Affairs
Tuesday February 12, 2019
8:55 AM
State Capitol, Conference Room 325

In consideration of
HB 593
RELATING TO LAND USE

Chairs Lowen and; Vice Chairs Wildberger and; and members of the Senate Committees on Energy and Environmental Protection; and Water and Land:

The Land Use Commission (LUC) opposes this measure that would remove any restrictions on large solar development projects on Land Study Bureau ("LSB") A rated lands. Currently, any solar development on "A" rated agricultural lands needs to make available the area under the panels for compatible agricultural activities, at reduced lease rents, and go through the State Special Permit process. This compromise between renewable energy development and agricultural use on our best remaining agricultural lands has worked for several solar development projects in recent years.

The LUC supports renewable energy development on suitable lands that do not adversely affect access to and intensive production on our highest quality agricultural lands.

Thank you for the opportunity to testify on this matter.

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OFFICE OF PLANNING
STATE OF HAWAII

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Statement of
RODNEY FUNAKOSHI
Planning Program Administrator, Office of Planning
before the
HOUSE COMMITTEES ON ENERGY AND ENVIRONMENTAL PROTECTION AND WATER, LAND AND HAWAIIAN AFFAIRS
Tuesday, February 12, 2019
8:55 AM
State Capitol, Conference Room 325

in consideration of
HB 593
RELATING TO LAND USE.

Chairs Lowen and Yamane, Vice Chairs Wildberger and Todd, and Members of the House Committees on Energy and Environmental Protection and Water, Land and Hawaiian Affairs.

The Office of Planning (OP) **opposes** HB 593, which would amend Hawaii Revised Statutes (HRS) §205-2 to allow solar energy facilities on lands classified by the Land Study Bureau's (LSB) detailed land classification as "A" rated lands. HB 593 also provides that A-rated lands proposed for solar energy facilities may be subject to a State Special Permit if the facility occupies more than 10-percent of the acreage of the parcel or 20-acres of land. Also, HB 593 would also amend Hawaii Revised Statutes (HRS) §205-4.5(a) (21) and 6 to allow solar energy facilities on A lands to be subject to additional restrictions, such as: location within two miles of a 138kV transmission line, exclusion from State lands, providing water infrastructure for any agricultural production impacted, and site restoration to its original pre-use condition.

OP is concerned that the use of agricultural lands for solar energy facilities raises the issue of how to balance conflicting goals. While OP recognizes that solar energy facilities provide an important source of renewable clean energy, OP is moreso concerned that allowing solar energy facilities on A rated lands, which constitute the most productive agricultural lands in the State, would seriously impair the State's long-term agricultural productivity.

There is a strong demand for the agricultural lands by solar companies because they are relatively cheap, generally located away from most residential centers, and are often on relatively flat terrain. Solar farms are also much more profitable than growing crops.

Currently, the statute allows solar energy facilities to be situated on B, C, D and E rated lands. As recently as five years ago, utility scale solar farms were largely precluded on B and C lands, as there was previously a 10 percent or 20-acre limitation on lands which could be used for solar. In 2014, this restriction was lifted by a statutory amendment allowing solar facilities to be granted by special use permits regardless of acreage.

In the State of Hawaii, A-rated lands constitute only three (3) percent, or 56,000 acres, of the 1,829,335 acres of lands within the State Agricultural Land Use District. Unless planned for urban growth by the county, these highly rated lands should remain available for agricultural production in the interests of agricultural food security and self-sufficiency. Lesser quality agricultural lands are abundantly available for solar farms.

The availability of agricultural land for solar energy generation also has the effect of making agricultural land more expensive and less available for farming. This measure would allow encroachment into the highest quality agricultural lands that could provide food security and sustainability for the State in the future.

Thank you for this opportunity to testify.

DAVID Y. IGE
Governor

JOSH GREEN
Lt. Governor

PHYLLIS SHIMABUKURO-GEISER
Acting Chairperson
Board of Agriculture

State of Hawaii
DEPARTMENT OF AGRICULTURE
1428 South King Street
Honolulu, Hawaii 96814-2512
Phone: (808) 973-9600 FAX: (808) 973-9613

TESTIMONY OF THE DEPARTMENT OF AGRICULTURE

BEFORE THE HOUSE COMMITTEES ON ENERGY & ENVIRONMENTAL PROTECTION, AND WATER, LAND, & HAWAIIAN AFFAIRS

FEBRUARY 12, 2019
8:55 A.M.
CONFERENCE ROOM 325

HOUSE BILL NO. 593
RELATING TO LAND USE

Chairpersons Yamane and Lowen and Members of the Committees:

Thank you for the opportunity to testify on House Bill 593 that authorizes the development of utility scale solar development projects on "A" rated land in the Agricultural District. The Department of Agriculture strongly opposes this measure.

This bill seeks to amend two sections in Chapter 205 to establish solar energy facilities (SEF) as a permitted use on "A" rated agricultural land. The amendments will allow SEFs on "A" rated agricultural land if granted a special use permit that includes the following requirements (page 18, line 12 to page 20, line 2):

A. The SEF is located within 2 miles of a 138kV transmission line;
B. Limit the use of the "A" rated lands being used for solar energy purposes for up 35 years with possibility of extension;
C. The SEF shall not be located on any State-owned lands;
D. The SEF operator provides water infrastructure to any service area in which agricultural production has been impacted by the SEF;
E. The area on which the SEF is located shall be restored to its original, pre-use condition; and
F. The Land Use Commission shall hold public hearings on the SEF prior to construction.

G. These amendments shall be repealed on June 30, 2025.

The SEF also must comply with the existing statutory requirements that the land upon which the SEF is located "…is also made available for compatible agricultural activities at a lease rate that is at least fifty per cent less below the fair market rate for comparable properties" (page 17, lines 10-14).

Since 2008, the Department of Agriculture has guardedly supported the responsible development of renewable energy resources such as solar energy facilities that do not adversely affect the resources essential to agricultural production and increased food self-sufficiency. Over the past ten years, amendments to Chapter 205 (State land use law) has dramatically increased the ability for solar energy facilities to increase its footprint on Hawaii's most productive agricultural land.

1. Act 31 (2008) establishes solar energy facilities as a permitted use on Land Study Bureau "D" and "E" rated agricultural lands. Despite their lower productivity potential, these agricultural lands still have agricultural utility such as livestock grazing, plant nursery and foliage, Kona coffee, and unirrigated papaya.
2. Act 217 (2011) expanded the reach of solar energy facilities to "B" and "C" rated lands with an acreage limitation of 10 percent of the parcel, or 20 acres, whichever is less. Agricultural lands with "B" and "C" ratings indicate fair to good capacity for intensive agricultural production. "B" and "C" rated agricultural lands are more likely to be considered and designated as Important Agricultural Lands by the Land Use Commission. Less than 25 percent of the agricultural lands in Hawaii are classified as "B" and "C". The Department has asked that siting for solar energy facilities first consider locations on "D" and "E" lands
3. Act 55 (2014) substantially increased the acreage of "B" and "C" agricultural lands available for solar energy facilities without acreage limitations if the facilities "make available" the facilities land area to agricultural activities that are "compatible" with solar energy facilities, at land lease rents 50 percent below fair market, and are granted special permit approval. The only compatible agricultural activity established to date is sheep grazing. Livestock grazing is

about the lowest valued agricultural land use and is an underutilization of the productivity potential of “B” and “C” agricultural lands.

4. Act 52 (2014) allows solar energy facilities on “A” rated lands provided very restrictive conditions are met. To date, only the Hawaii Agriculture Research Center in Kunia, Oahu was successful in establishing a small solar energy array over its access road. This law is repealed June 30th of this year.

As written, HB 593 establishes solar energy facilities as a permitted use on “A” agricultural land if the facility is “made available” for compatible agricultural activities, land lease rents 50 percent below fair market, and is granted special permit approval. The additional condition that the SEF must be within two miles of a 138kV transmission line opens up substantial acreage of “A” rated agricultural land for SEF use. For example, we estimate that a corridor of two miles on both sides of Hawaiian Electric Company’s 138kV line that runs perpendicular to and over Kunia Road will occupy most of the Kunia corridor, identified by the City and County of Honolulu as among the best agricultural lands in the State (Central Oahu Sustainable Communities Plan” – 2002, City and County of Honolulu, page 2-11; and “Oahu Agriculture: Situation, Outlook and Issues”; February 2100, Plasch Econ Pacific LLC, page 44). To allow solar energy facilities as a permitted use anywhere within this corridor, except on State-owned lands, for a minimum of 35 years, or even until 2025, is unacceptable.

The Department of Agriculture believes that renewable energy development is essential to Hawaii’s energy security, provided it is allowed in a manner that does not adversely affect access to and intensive production on prime agricultural land that is fundamental to agricultural production and food security. Other than the existing highly restricted use of “A” rated agricultural land as provided by Act 52 (SLH 2014), we ask that SEFs not be permitted on “A” rated lands. Only 15 percent (less than 20,000 acres) of Oahu’s agricultural zoned land is rated “A” and the largest concentration of “A” rated land is along Kunia Road, between Royal Kunia and Village Park residential communities to the south and Schofield Barracks and Wheeler Army Airfield to the north.

Thank you for the opportunity to comment on this measure.

Hawaii Pineapple Company, LLC
2500 Kalakaua Ave. #2406, Honolulu, Hawaii 96815
Ph: 808-921-5899
Fax: 866-542-9741

February 7, 2019

To Whom It May Concern:
As an introduction, my name is Craig Bowden, managing member of Hawaii Pineapple Company. My partners and I have been farming in Hawaii for decades and want to testify in support of the concept of combining smart agricultural/farming operations and smart renewable energy production in a required shared + linked use of select Class A lands here in Hawaii. I have been and am currently involved with various agricultural operations in Hawaii, California, and around the world but my roots are here Hawaii.

I want to make it clear that class A lands are a very important resource and something that we must steward but farming and agriculture in our state has challenges that do not exist elsewhere. If the State is serious about providing food security and a viable agricultural industry, it cannot rely only on current or past business models for farming (I personally worked for both the sugar and pineapple industries in Hawaii and unfortunately years after all the plantation closings many acres once productive are now growing weeds). Hawaiian agriculture needs real support from all levels of society and government, new methods and new incentives are also needed.

By implementing farming in conjunction with clean renewable energy we have an opportunity (not a guarantee) to make farming more viable. We may be able to create a future where Hawaii farmers can offset some of their competitive disadvantages and high costs… this could work by linking some of the beneficial economics of renewable energy directly to farmers receiving access to *low cost electricity* (for processing, operations and irrigation) *and low cost adjacent land*, both of which are more expensive in Hawaii than almost anyplace else where successful farming occurs. Some in Hawaii view renewable

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energy as competitive with farming which may or may not be the case. This is a matter of choice, design, and discipline which are highly dependent on how that relationship is defined and shaped in terms of good policies, incentives, and practices.

I don't want this testimony to be misconstrued, preserving Class A lands are very important and something that we need to steward but unless Hawaii learns how to find ways to help make Hawaiian agriculture more profitable and sustainable these prime agricultural lands will eventually grow weeds instead of crops. All of us in the State like to think that we are an island community where we work, live and play together with aloha. Too often this is not the case. It would be very nice if we could actually work together, and find better solutions to assure a more sustainable energy future and a more realistic and viable future for Hawaii's agricultural industry.

In closing: when considering how we farm and Hawaii's land use choices we should always try to think and do what is Pono and we have as a guide the Hawaii state motto: *Ua Mau ke Ea o ka ʻĀina i ka Pono* or "The life of the land is perpetuated in righteousness" if we all try to do that more we might come up with some great long term solutions.
Mahalo for taking the time to consider these thoughts.
Sincerely,
R. Craig Bowden
President/Managing Member
Hawaii Pineapple Company LLC
Hawaiian Crown Plantation (Honolulu)
Hawaiian Crown Plantation & Chocolate Factory (Hilo)
Hawaiian Crown LLC
www.hawaiiancrown.com

COMMITTEE ON ENERGY & ENVIRONMENTAL PROTECTION

COMMITTEE ON WATER, LAND, & HAWAIIAN AFFAIRS

HB593 RELATING TO LAND USE

DATE: Tuesday, February 12, 2019
TIME: 8:55 AM
PLACE: Conference Room 325

TESTIMONY OF Kerry Kakazu, MetroGrow Hawaii

Chairs Lowen, Yamane, Vice Chairs Wildberger, Todd and members of the Committees:

POSITION:

Thank you for the opportunity to testify on House Bill 593.

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.

P.O. Box 253, Kunia, Hawai'i 96759
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e-mail info@hfbf.org; www.hfbf.org

February 12, 2019

HEARING BEFORE THE
HOUSE COMMITTEE ON ENERGY & ENVIRONMENTAL PROTECTION
HOUSE COMMITTEE ON WATER, LAND & HAWAIIAN AFFAIRS

TESTIMONY ON HB 593
RELATING TO LAND USE

Room 325
8:55 AM

Aloha Chairs Lowen and Yamane, Vice Chairs Wildberger and Todd, 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. We are concerned about permanent loss of Hawaii's farmland. This bill will allow 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, our state's priorities, and public trust principles.

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. Hawaii Farm Bureau strongly believes that siting these developments on A classified lands, as proposed in SB 1008, will be disastrous for agriculture in Hawaii.

Thank you for your consideration of our position.

Email: communications@ulupono.com

HOUSE COMMITTEES ON ENERGY & ENVIRONMENTAL PROTECTION AND WATER, LAND, & HAWAIIAN AFFAIRS
Tuesday, February 12, 2019 — 8:55 a.m. — Room 325

Ulupono Initiative has <u>Comments</u> on HB 593, Relating to Land Use

Dear Chair Gabbard, Vice Chair Ruderman, 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 <u>comments</u> on HB 593, 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

HAWAII CLEAN POWER ALLIANCE

COMMITTEE ON ENERGY & ENVIRONMENTAL PROTECTION

COMMITTEE ON WATER, LAND, & HAWAIIAN AFFAIRS

DATE: Tuesday, February 12, 2019
TIME: 8:55 AM
PLACE: Conference Room 325

HB593 RELATING TO LAND USE

Chairs Lowen, Yamane, Vice Chairs Wildberger, Todd and members of the Committees:

POSITION: We **strongly support HB593**

DESCRIPTION:

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

TESTIMONY

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. The benefits of clean, utility scale, grid connected energy projects are numerous, including reducing Hawaii's dependence on fossil fuels, lowering carbon emissions, 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 experience 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 scare 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 occuring 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, by traditional farmers, 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.

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such as AeroFarms in New Jersey which delivers up to 30 harvests VS 3 from a traditional farm in New York State https://aerofarms.com/. Skygreens out of Singapore report similar ten times yields vs traditional farming https://www.skygreens.com/

We support HB593 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 inceasing our energy security, and reliabiility 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 preferential rates for protected agrigulture.

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 return to sole use of agriculture.
- Provides time for the state and counties to create a master plan and and policies to insure LSB A lands are not populated with housing, which can be done today via the CPR and subdivision process, with no oversite 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.

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 offered on the land at a discounted price to farmer(s). (at least 50% of the going lease rate or less).
- An applicant must provide water infrastruture to the farmer.
- The solar partner will leave any infrastructure that is provided and beneficial to the farmer when PV farm exits.
- The American Farm Bureau Federation has issued a comprehensive U.S. Energy Policy[1] which supports renewable energy for farmers benefit:
    - To help reduce the nation's dependence on foreign energy resources, stimulate energy production within the agricultural sector, and to ensure that farmers and ranchers have access to affordable energy.

[1] https://www.fb.org/issues/energy/comprehensive-us-energy-policy/

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- Farm Bureau advocates policies that will create a diverse, domestic energy supply to fuel America's economic growth and prosperity while strengthening our energy security. Further development and use of renewable energy sources such as ethanol biodiesel, biomass, solar and wind are critical to our nation's energy future and will help further strengthen the overall national security of the United States. Farm Bureau supports a comprehensive approach to fulfilling our energy needs of today and into the future.

- 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 restauranteurs who purchase the food are compiiance 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.
- 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.

Thank you for the opportunity to testify.

1100 Alakea St. | Suite 3100 | Honolulu | Hawaii |96813

Hawaii Interfaith Power & Light (HIPL)

An Interfaith Response to Climate Change

To: **Energy & Environmental Protection (EEP) and Water, Land, & Hawaiian Affairs (WLH)**
From: **Hawaii Interfaith Power & Light (HIPL)**
Date: Tuesday, February 12, 2019, 8:55 AM
Place: Conference Room 325, State Capitol, 415 S. Beretania St.

Re: Opposition to HB593. Relating to Land Use.

Aloha e Chairs Lowen and Yamane, Vice Chairs Wildberger and Todd, and EEP and WLH 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**.

HIPL is opposed to the development of utility-scale solar projects on lands with soil classified as overall productivity rating class A.

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

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

Please, defer HB593. Thank you!

Aloha no,
Steve Lohse
Hawaii Interfaith Power & Light (HIPL)
lohse@hawaii.edu
https://hipl.org/

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

- *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
Submitted on: 2/11/2019 8:26:59 AM
Testimony for EEP on 2/12/2019 8:55:00 AM

Submitted By	Organization	Testifier Position	Present at Hearing
Joseph Kohn MD	We Are One, Inc. - www.WeAreOne.cc - WAO	Oppose	No

Comments:

Strongly Oppose utility-scale solar on prime ag land. Food for people first.

www.WeAreOne.cc

HB-593
Submitted on: 2/11/2019 8:32:31 AM
Testimony for EEP on 2/12/2019 8:55:00 AM

Submitted By	Organization	Testifier Position	Present at Hearing
Melodie Aduja	O`ahu County Committee on Legislative Priorities of the Democratic Party of Hawai`i	Oppose	No

Comments:

HB-593
Submitted on: 2/11/2019 11:13:53 AM
Testimony for EEP on 2/12/2019 8:55:00 AM

Submitted By	Organization	Testifier Position	Present at Hearing
VINCENT KIMURA	Smart Yields	Support	No

Comments:

COMMITTEE ON ENERGY & ENVIRONMENTAL PROTECTION

COMMITTEE ON WATER, LAND, & HAWAIIAN AFFAIRS

HB593 RELATING TO LAND USE

DATE: Tuesday, February 12, 2019
TIME: 8:55 AM
PLACE: Conference Room 325

TESTIMONY OF: DEAN J. OKIMOTO

Chairs Lowen, Yamane, Vice Chairs Wildberger, Todd and members of the Committees,

Thank you for the opportunity to testify on **House Bill 593 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.

COMMITTEE ON ENERGY & ENVIRONMENTAL PROTECTION

COMMITTEE ON WATER, LAND, & HAWAIIAN AFFAIRS

DATE: Tuesday, February 12, 2019
TIME: 8:55 AM
PLACE: Conference Room 325

HB593 RELATING TO LAND USE
TESTIMONY OF RICHARD HA, HAMAKUA SPRINGS

Chairs Lowen, Yamane, Vice Chairs Wildberger, Todd and members of the Committees:

POSITION:

Thank you for the opportunity to testify on HB593. **I strongly support HB593.**

DESCRIPTION:

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

TESTIMONY

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 have farmed on the Big Island for nearly 40 years, primarily bananas and hydroponic tomatoes. 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. Along the way we built a tissue culture lab.

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 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.

This way of helping farmers does not require a tax hike. That's why I like the idea of energy and agriculture helping each other out.

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

COMMITTEE ON ENERGY & ENVIRONMENTAL PROTECTION

COMMITTEE ON WATER, LAND, & HAWAIIAN AFFAIRS

HB593 RELATING TO LAND USE

DATE: Tuesday, February 12, 2019
TIME: 8:55 AM
PLACE: Conference Room 325

Chairs Lowen, Yamane, Vice Chairs Wildberger, Todd and members of the Committees,

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

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 pursuing this bill and I am absolutely certain that we are working to the benefit of the State of Hawii'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 and allow Hawaii to have a future of cooperation and progress.

HB-593
Submitted on: 2/8/2019 4:07:04 PM
Testimony for EEP on 2/12/2019 8:55:00 AM

Submitted By	Organization	Testifier Position	Present at Hearing
Augusto Decastro	Individual	Support	No

Comments:

HB-593
Submitted on: 2/8/2019 9:07:25 PM
Testimony for EEP on 2/12/2019 8:55:00 AM

Submitted By	Organization	Testifier Position	Present at Hearing
Erica Scott	Individual	Support	No

Comments:

HB-593
Submitted on: 2/10/2019 4:50:15 PM
Testimony for EEP on 2/12/2019 8:55:00 AM

Submitted By	Organization	Testifier Position	Present at Hearing
Bianca Isaki	Individual	Oppose	Yes

Comments:

Aloha committee members,

I strongly oppose HB593.

First, utility scale solar power plants are not permitted on the 56,000 acres of prime (ALISH A) lands which account for just three (3) percent of the 1.4 million acres of agriculturally-zoned land in the State and they should not be.

Second, this bill is designed to all a 52-megawatt, 180-acre, utility-scale solar on prime ag land in the agriculturally rich area of Kunia Road near Village Park & Waipahu. These large scale solar plants have many unreviewed environmental impacts, due to their carve out from HRS chapter 343. The Kawailoa solar project on the north shore has caused significant nearshore pollution. Instead, Hawai`i should be supporting distributed solar projects.

Please do not pass HB593.

Yours,

Bianca Isaki, Ph.D., Esq.

HB-593
Submitted on: 2/11/2019 9:42:05 AM
Testimony for EEP on 2/12/2019 8:55:00 AM

Submitted By	Organization	Testifier Position	Present at Hearing
Shannon Rudolph	Individual	Oppose	No

Comments:

Strongly Oppose.
Solar panels need to be on every roof top - not on crucial ag lands that we need for food!

HB-593
Submitted on: 2/11/2019 10:14:08 AM
Testimony for EEP on 2/12/2019 8:55:00 AM

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

Comments:

Although I like solar power, I think it would be easier to reloccate the solar farm than the food-producing farm. Support sustainability!

HB-593
Submitted on: 2/11/2019 2:04:18 PM
Testimony for EEP on 2/12/2019 8:55:00 AM

Submitted By	Organization	Testifier Position	Present at Hearing
Javier Mendez-Alvarez	Individual	Oppose	No

Comments:

HB-593
Submitted on: 2/11/2019 3:25:50 PM
Testimony for EEP on 2/12/2019 8:55:00 AM

Submitted By	Organization	Testifier Position	Present at Hearing
Mary Lacques	Individual	Oppose	No

Comments:

LATE

HB-593
Submitted on: 2/11/2019 5:44:50 PM
Testimony for EEP on 2/12/2019 8:55:00 AM

Submitted By	Organization	Testifier Position	Present at Hearing
Hanalei Fergerstrom	Na Kupuna Moku O Keawe	Oppose	No

Comments:

Na Kupuna Mpoku O Keawe OPPOSES this bill. We should not even consider projects, no matter how good they could be, in exchange for top tier Agricultural lands. We are losing are ag lands and cannot afford it any longer. Hanlei Fergerstrom Na Kupuna Moku O Keawe

LATE

HB-593
Submitted on: 2/11/2019 7:25:16 PM
Testimony for EEP on 2/12/2019 8:55:00 AM

Submitted By	Organization	Testifier Position	Present at Hearing
Henry Curtis	Life of the Land	Oppose	Yes

Comments:

Please protect prime ALISH A agricultural land needed to triple local food production and to supply food when extreme weather events hit

Mahalo

LATE

HB-593
Submitted on: 2/12/2019 5:03:44 AM
Testimony for EEP on 2/12/2019 8:55:00 AM

Submitted By	Organization	Testifier Position	Present at Hearing
Brian Murphy	Individual	Oppose	No

Comments:

Aloha lawmakers,

Agricultural land is for growing food! Put solar panels on rooftops, barns, parking lots, but NOT on farmland! We import 90 percent of our food, which is Hawaii's lawmaker's fault!

Please, amend this bill to ban tourists staying on agricultural land. "Agricultural tourism activities, including overnight accommodations of twenty-one days or less," is not acceptable use of agricultural land.

Protect Hawaii's agricultrual land, and stop making zillions of "exceptions" and "fast tracks" for building homes, on living quaters on agricultural land. (transient self-contained "workers" trailers seem OK to me).

Mahalo for your kind attention,

Brian Murphy

Maui, Hawaii

LATE

HB-593
Submitted on: 2/12/2019 5:01:29 AM
Testimony for EEP on 2/12/2019 8:55:00 AM

Submitted By	Organization	Testifier Position	Present at Hearing
Mary Whispering Wind	Individual	Oppose	No

Comments:

Aloha lawmakers,

Agricultural land is for growing food! Put solar panels on rooftops, barns, parking lots, but NOT on farmland! We import 90 percent of our food, which is Hawaii's lawmaker's fault!

Please, amend this bill to ban tourists staying on agricultural land. "Agricultural tourism activities, including overnight accommodations of twenty-one days or less," is not acceptable use of agricultural land.

Protect Hawaii's agricultrual land, and stop making zillions of "exceptions" and "fast tracks" for building homes, on living quaters on agricultural land. (transient self-contained "workers" trailers seem OK to me.

Mahalo for your kind attention,

Mary Overbay

Puunene, Hawaii

HAWAII CLEAN POWER ALLIANCE

LATE

Proposed Revisions to HB593

HRS 205-4.5

1. (NEW) Paragraph (21)(D)(i). Decrease radius from two (2) miles to one (1) mile. Clarify that the radius starts from edge of the existing right of way for the transmission lines. (Surveyable marker)

2. (NEW technical amendment) Paragraph (21)(D)(vi). Revise to state "hearing" instead of "hearings". (LUC Commission process)

3. (NEW) Paragraph (21)(D)(vii). Add new provision specifying that the lease rent shall be sixty percent (60%) below the fair market rent for comparable properties (as opposed to fifty percent (50%) in paragraph (21)(A)).

4. (NEW) Paragraph (21)(D)(viii). Add new provision stating that the entire solar energy facilities lands shall have one or more binding contacts to farm the lands for the term of the facilities.

5. (NEW) Paragraph (21)(D)(ix). Add new provision stating that the solar energy facilities operator shall provide for the electricity needs of the farmers who enter into binding contacts to farm the lands. (To guarantee food production)

6. (NEW) Paragraph (21)(D)(x). Add new provision stating that the operator shall construct a facility to be used for agricultural activities within the entire solar energy facilities lands for the farmers on site. The size of the facility shall be no less than 10 square foot per acre of land directly underlying the solar energy facilities.

7. (NEW) Paragraph (21)(D)(xi). Add new provision stating that the operator shall donate a one-time lump sum of $3,000 per acre of the land directly underlying the solar energy facilities to one nonprofit entity, or spread out between multiple nonprofit entities. The purpose of the nonprofit entities shall be to advance the agriculture communities to increase food production. The donated funds shall be used by the nonprofit entities to support and educate farmers and students in traditional and agriculture technology farming techniques.

8. (NEW) Paragraph (21)(D)(xii). Add new provision stating that the total amount of class A lands directly underlying all solar energy facilities in Hawaii shall not be greater than one percent (1%) of all class A lands in Hawaii.

1100 Alakea St.| Suite 3100 | Honolulu | Hawaii | 96813

TESTIMONY FROM BENNETTE MISALUCHA, EXECUTIVE DIRECTOR

In Opposition of HB593
Relating to Land Use

HOUSE COMMITTEE ON ENERGY & ENVIRONMENTAL PROTECTION
HOUSE COMMITTEE ON WATER, LAND & HAWAIIAN AFFAIRS
February 12, 2019, 8:55 a.m.
Conference Room 325

Chairs Lowen and Yamane and members of the committees:

The Hawaii Crop Improvement Association (HCIA) opposes HB593, 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 to keep prime agricultural lands in agriculture.

Mahalo for your time and consideration.

Respectfully,

Bennette Misalucha
Executive Director, 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.

P.O. Box 126 Aiea, HI 96701
Telephone: (808) 594-3611 – Email: Director@bettercropshawaii.com
www.bettercropshawaii.com

LATE

HB-593
Submitted on: 2/12/2019 8:31:45 PM
Testimony for EEP on 2/12/2019 8:55:00 AM

Submitted By	Organization	Testifier Position	Present at Hearing
Sherri Thal	Individual	Oppose	No

Comments:

This is a tricky subject, but one that needs to be addressed. We need both solar energy and agriculture in our state, but we DO NOT NEED a utility scale solar panel "farm" on agricultural lands!

Rooftop solar for EVERYONE and EVERY BUSINESS and PARKING LOT is Completely appropriate and necessary, but building a 180 acre utility scale solar array is incrongrous on our precious agricultural lands.

I STRONGLY OPPOSE HB593 and its companion, SB1008

Mahalo and Malama ka 'aina