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GOVERNOR

GWEN S. YAMAMOTO LAU
EXECUTIVE DIRECTOR

HAWAII GREEN INFRASTRUCTURE AUTHORITY

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TESTIMONY OF GWEN YAMAMOTO LAU EXECUTIVE DIRECTOR, HAWAII GREEN INFRASTRUCTURE AUTHORITY

BEFORE THE HOUSE COMMITTEE ON FINANCE

FRIDAY, FEBRUARY 24, 2017
11:00 A.M.

STATE CAPITOL, CONFERENCE ROOM 308

HOUSE BILL NO. 1593 HD1
RELATING TO GREEN INFRASTRUCTURE

Chair Luke, Vice Chair Cullen and Members of the Finance Committee:

Thank you for the opportunity to testify on House Bill 1593 HD1, relating to green infrastructure. This bill proposes to reduce some of the oversight of the program to encourage more rapid deployment of loans and to create a clean energy savings jump start program. The Hawaii Green Infrastructure Authority ("Authority") strongly supports the intent of this bill with measures that encourage more rapid deployment of loans and respectfully offer the following comments and suggested amendments to better serve the ratepayers, especially those identified as underserved (renters, low and moderate income households and nonprofit organizations).

As one of the original objectives of the GEMS funds was to facilitate investment in clean energy technology to help the state achieve its clean energy goals, it is critical that rebates for storage be provided when storage is installed together with solar PV. Thus we suggest the following amendment below.

§196-B Energy storage system rebate program. (a)

Notwithstanding any other law to the contrary, the authority shall establish a rebate program within the jump start program that incentivizes the installation of energy storage systems that are installed concurrently with solar PV systems.

As the Green Energy Market Securitization bond is being serviced by ratepayers of the HECO companies, any benefit provided by the GEMS funds should only be available to ratepayers connected to the electric utility grid. Thus we suggest the following amendment below.

SECTION 3. Section 196-61, Hawaii Revised Statutes, is amended by adding four new definitions to be appropriately inserted and to read as follows:

8) Is connected to an electric utility grid, unless the electric utility has proposed interconnection fees of ten per cent or greater of the purchase price of the energy storage system.

While the GEMS program has suffered setbacks and was clearly not able to meet its initial deployment targets, the deployment of loan funds, which began in January 2016, has gained positive momentum and is expected to continue over the remainder of the current fiscal year. As of February 3, 2017, \$13.4 million in GEMS funds has been committed.

Further, while the PUC Decision and Order requires 51% of the funds to benefit the “underserved,”¹ to date, over 90% of the loans funded benefit this target group. Similarly, the Authority committed up to \$9.6 million to finance solar hot water on Molokai, a project which has the potential of transforming and reshaping the energy landscape on the island by reducing energy consumption and lowering energy costs.

Additionally, the Authority, its loan servicer and the HECO Companies are diligently working on an on-bill repayment mechanism expected to launch year. This mechanism will truly democratize clean energy by providing renters and low-income households an opportunity to participate. Leveraging on-bill, the Authority will seek opportunities to replicate and scale the “Molokai Project” to homestead and other communities.

Finally, the Authority received numerous inquiries on financing community solar projects and will be working on developing a financing product upon finalization of the CBRE program. We are eager to finance these and other impactful types of projects that help facilitate clean energy adoption and achieve the state’s energy goals. Thus we suggest the following changes below.

SECTION 12. There is appropriated out of the Hawaii green infrastructure special fund established pursuant to section 196-65, Hawaii Revised Statutes, or any other eligible funds procured by the Hawaii green infrastructure authority, a sum up to \$20,000,000 or so much thereof as may be necessary for fiscal year 2017-2018 to be deposited into the clean energy savings jump start fund established pursuant to section 196-A, Hawaii Revised Statutes.

SECTION 13. There is allocated out of the clean energy savings jump start program fund, the sum of \$10,000,000 or so much thereof as may be necessary for fiscal year 2017-2018 for the energy storage system rebate program.

Thank you for this opportunity to testify.

¹ Defined as renters, low and moderate-income households and nonprofits.

TESTIMONY OF RANDY IWASE
CHAIR, PUBLIC UTILITIES COMMISSION
STATE OF HAWAII
TO THE
HOUSE COMMITTEE ON
FINANCE

February 24, 2017
11:00 a.m.

MEASURE: H.B. No. 1593, H.D. 1
TITLE: RELATING TO GREEN INFRASTRUCTURE

Chair Luke and Members of the Committee:

DESCRIPTION:

This measure would establish the clean energy savings jump start program and fund to expend moneys for the issuance of rebates, energy education, energy demonstration projects for affordable multi-family rental projects, and credit enhancements. This measure would also establish the energy storage system rebate program within the clean energy savings jump start program to expend moneys on energy storage rebates. This measure would also amend the green infrastructure loan program by deleting the Public Utilities Commission's ("Commission's") loan approval authority.

POSITION:

The Commission offers the following comments for the Committee's consideration.

COMMENTS:

The Commission defers to the Department of Business, Economic Development, and Tourism with respect to the proposals to establish a clean energy jump start program and an energy storage system rebate program.

However, the Commission has concerns that the Hawaii Green Infrastructure Special Fund was intended and designed to fund a loan program, not a rebate program, or any other type of program that does not generate a repayment stream. Designating monies from the Hawaii Green Infrastructure Special Fund for purposes other than providing

loans is inconsistent with the purpose and design of the Hawaii Green Infrastructure Special Fund and would result in a lack of funds for the repayment of what is owed on these loans. This could lead to unintended consequences, including increased customer surcharges and limiting the State's ability to achieve the statutorily required energy efficiency portfolio standards, pursuant to Section 269-96.

Thank you for the opportunity to testify on this measure.

DAVID Y. IGE
GOVERNOR



WESLEY K. MACHIDA
DIRECTOR

LAUREL A. JOHNSTON
DEPUTY DIRECTOR

EMPLOYEES' RETIREMENT SYSTEM
HAWAII EMPLOYER-UNION HEALTH BENEFITS TRUST FUND
OFFICE OF THE PUBLIC DEFENDER

STATE OF HAWAII
DEPARTMENT OF BUDGET AND FINANCE
P.O. BOX 150
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ADMINISTRATIVE AND RESEARCH OFFICE
BUDGET, PROGRAM PLANNING AND
MANAGEMENT DIVISION
FINANCIAL ADMINISTRATION DIVISION
OFFICE OF FEDERAL AWARDS MANAGEMENT (OFAM)

WRITTEN ONLY
TESTIMONY BY WESLEY K. MACHIDA
DIRECTOR, DEPARTMENT OF BUDGET AND FINANCE
TO THE HOUSE COMMITTEE ON FINANCE
ON
HOUSE BILL NO. 1593, H.D. 1

February 24, 2017
11:00 a.m.
Room 308

RELATING TO GREEN INFRASTRUCTURE

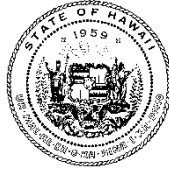
House Bill No. 1593, H.D. 1, establishes the Clean Energy Savings Jump Start Program and special fund; establishes the Energy Storage System Rebate Program; and amends the Green Infrastructure Loan Program by deleting the Public Utilities Commission's (PUC) loan approval authority.

As a matter of general policy, the Department of Budget and Finance does not support the creation of any special fund which does not meet the requirements of Section 37-52.3, HRS. Special funds should: 1) serve a need as demonstrated by the purpose, scope of work and an explanation why the program cannot be implemented successfully under the general fund appropriation process; 2) reflect a clear nexus between the benefits sought and charges made upon the users or beneficiaries or a clear link between the program and the sources of revenue; 3) provide an appropriate means of financing for the program or activity; and 4) demonstrate the capacity to be financially self-sustaining. In regards to House Bill No. 1593, H.D. 1, it is difficult to determine whether the proposed special fund would be self-sustaining.

We defer to the Department of Business, Economic Development and Tourism's Hawaii Green Infrastructure Authority and the Department of Commerce and Consumer Affairs' PUC on the remaining provisions of this measure.

Thank you for your consideration of our comments.

DAVID Y. IGE
GOVERNOR



SARAH ALLEN
ADMINISTRATOR
MARA SMITH
ASSISTANT ADMINISTRATOR

**STATE OF HAWAII
STATE PROCUREMENT OFFICE**

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TESTIMONY
OF
SARAH ALLEN, ADMINISTRATOR
STATE PROCUREMENT OFFICE

TO THE HOUSE COMMITTEE
ON
FINANCE

February 24, 2017, 11:00 a.m.

HOUSE BILL 1593, HD1
RELATING TO GREEN INFRASTRUCTURE

Chair Luke, Vice-Chair Cullen, and members of the committee, thank you for the opportunity to submit testimony on House Bill 1593, HD1.

The State Procurement Office (SPO) recommends that the administration of the loan program be subject to HRS Chapter 103D.

The SPO supports the intent of the bill, however, SPO has concerns over the verbiage on page 6, lines 9 to 10, which states: "Procurement of services shall be exempt from the requirements of chapter 103D."

The Hawaii Public Procurement Code (Code) is the single source of public procurement policy to be applied equally and uniformly, while providing fairness, open competition, a level playing field, government disclosure and transparency in the procurement and contracting process vital to good government.

Public procurement's primary objective is to provide everyone equal opportunity to compete for government contracts, to prevent favoritism, collusion, or fraud in awarding of contracts. To legislate that any one entity should be exempt from compliance with HRS chapter 103D conveys a sense of disproportionate equality in the law's application.

Exemptions to the Code mean that all procurements made with taxpayer monies will not have the same oversight, accountability and transparency requirements mandated by those procurements processes provided in the code. It means that there is no requirement for due

diligence, proper planning or consideration of protections for the state in contract terms and conditions, nor are there any set requirements to conduct cost and price analysis and market research or post-award contract management. As such, Agencies can choose whether to compete or go directly to one contractor. As a result, leveraging economies of scale and cost savings efficiencies found in the consistent application of the procurement code are lost. It also means Agencies are not required to adhere to the code's procurement integrity laws.

The National Association of State Procurement Officials state: "Businesses suffer when there is inconsistency in procurement laws and regulations. Complex, arcane procurement rules of numerous jurisdictions discourage competition by raising the costs to businesses to understand and comply with these different rules. Higher costs are recovered through the prices offered by a smaller pool of competitors, resulting in unnecessarily inflated costs to state and local governments."

When public bodies or programs are removed from the state's Procurement Code it results in the harm described above. As these entities create their own procurement rules, businesses are forced to track their various practices.

Relieving some programs from some laws exempting or excluding them from compliance with a common set of legal requirements create an imbalance wherein the competitive environment become different among the various jurisdictions and the entire procurement process because less efficient and costlier for the state and vendors.

Thank you.



Before the House Committee on Finance
Friday, February 24, 2017; 11 a.m. Room 308
HB 1593 HD 1: Relating to Green Infrastructure

Aloha Chair Luke, Vice Chair Cullen, and members of the Committee,

On behalf of the Distributed Energy Resources Council of Hawaii (“DER Council”), I would like to testify in support for HB 1593 HD 1 which establishes the energy savings jump start program and an energy storage rebate program, in addition to streamlining the loan notification approval process.

The DER Council is a nonprofit trade organization formed to assist with the development of distributed energy resources and smart grid technologies which will support an affordable, reliable, and sustainable energy supply for Hawaii.

The investment in energy storage is seen as a crucial next step towards the development of a resilient and reliable electrical grid which can accommodate more renewable energy resources and help Hawaii achieve its clean energy goals. Specifically, energy storage contributes to grid modernization in a variety of ways. Energy storage can be utilized to shift peak load and supply capacity, provide many valuable ancillary services such as fast frequency response and regulating reserves¹, delay or offset the need for grid upgrades, and provide energy back-up during emergencies. Distributed energy storage also provides the greatest number of benefits in comparison to other storage technologies, and should be seen as a key driver in Hawaii’s clean energy development.²

In addition, distributed energy storage puts private capital to work through customer investments which provide benefits to all rate payers. Energy storage also helps keep local dollars at home by reducing the need for fossil fuels, reducing federal tax liability through the federal investment tax credit, and by supporting an industry that provides good local green jobs that cannot be outsourced.

The establishment of a rebate program under the GEMS authority has several advantages. First, the rebate is designed to be allocated over several installation types from residential, to commercial, multi-family, and utility scale projects connected to Community Solar installations,

¹ See Docket No. 2015-0412 Demand Response Pilot Project currently underway.

² See “The Economics of Battery Energy Storage,” Rocky Mountain Institute October 2015 at 6 where distributed behind the meter battery storage provides 13 grid services—the greatest number of grid services when compared to energy storage located on the distribution and transmission system.

with a special focus on underserved customers. This means that all types of energy storage installations will be given a fair chance to utilize the rebate, so long as they are market ready and available.

Next, a rebate established under GEMS would put some of the dormant funds to good use by helping to accelerate the adoption of renewable energy for all ratepayers. The proposed rebate would reduce the payback period on an average sized residential energy storage system nearly in half, which would help spur adoption and encourage customers to invest. Also, a GEMS rebate would support existing and new clean energy tariffs such as the interim time of use program and the upcoming demand response tariffs which are designed to provide ancillary services to the grid and will be open for enrollment the end of 2017.

HB 1593 HD 1 also ensures that the control of the monies is kept within the GEMS program and can be used in combination with GEMS loan products in order to offer a timely loan product which can be administered immediately. At this point, only about 2% of the GEMS funds have been utilized even though the program was established by the legislature in 2013. HB 1593 HD 1 makes use of existing funds in a measured and predictable way.

Finally, the DER Council recommends that the GEMS authority submit an annual review to the commission and be subject to audit on a yearly basis to ensure sufficient progress and oversight of the program's investments, much in the same way that the PBF administrator is subject to yearly PUC review. This change in approval process will allow the GEMS authority to respond quickly to the market and deploy the funds as needed, but also ensure adequate oversight through a yearly review by the commission.

Distributed energy generation and storage stands to take Hawaii to a new era where customer-invested systems are aggregated and utilized by the utility as a resource for all ratepayers. We ask that the legislature support this next stage in Hawaii's development by voting yes on HB 1593 HD 1.

Thank you for the opportunity to testify

Leslie Cole-Brooks
Executive Director
Distributed Energy Resources Council of Hawaii



COLLEGE OF SOCIAL SCIENCES
HAWAII ENERGY POLICY FORUM
UNIVERSITY OF HAWAI'I AT MĀNOA

Hawaii Energy Policy Forum

Jeanne Schultz Afuvai, Hawaii Inst. for Public Affairs
Hajime Alabanza, Hawaii Solar Energy Association
John Antonio, US Dept of Agriculture
Karlie Asato, Hawaii Government Employees Assn
David Bissell, Kauai Island Utility Cooperative
Joseph Boivin, Hawaii Gas
Warren Bollmeier, Hawaii Renewable Energy Alliance
Michael Brittain, IBEW, Local Union 1260
Albert Chee, Chevron
Elizabeth Cole, The Kohala Center
Kyle Datta, Ulupono Initiative
Mitch Ewan, UH Hawaii Natural Energy Institute
Jay Fidell, ThinkTech Hawaii
Carl Freedman, Haiku Design & Analysis
Matthias Fripp, REIS at University of Hawaii
Ford Fuchigami, Hawaii Dept of Transportation
Justin Gruenstein, City & County of Honolulu
Dale Hahn, Ofc of US Senator Brian Schatz
Michael Hamnett, SSRI at University of Hawaii
Senator Lorraine Inouye, Hawaii State Legislature
Randy Iwase, Public Utilities Commission
Brian Kealoha, Hawaii Energy
Darren Kimura, Energy Industries
Kelly King, Sustainable Biodiesel Alliance
Kal Kobayashi, Maui County Energy Office
Representative Chris Lee, Hawaii State Legislature
Gladys Marrone, Building Industry Assn of Hawaii
Stephen Meder, UH Facilities and Planning
Joshua Michaels, Ofc of US Rep. Colleen Hanabusa
Sharon Moriwaki, UH Public Policy Center
Ron Nelson, US Pacific Command Energy Office
Jeffrey Ono, Division of Consumer Advocacy, DCCA
Stan Osseman, HCATT
Darren Pai, Hawaiian Electric Companies
Melissa Pavlicek, Hawaii Public Policy Advocates
Randy Perreira, Hawaii Government Employees Assn
Fredrick Redell, Maui County Energy Office
Rick Rocheleau, UH Hawaii Natural Energy Institute
Will Rolston, Hawaii County, Research & Development
Peter Rosegg, Hawaiian Electric Companies
Riley Saito, SunPower Systems
Scott Seu, Hawaiian Electric Companies
Joelle Simonpietri, UH Applied Research Lab
Ben Sullivan, Kauai County
Terry Surles, Hawaii State Energy Office, DBEDT
Lance Tanaka, Par Hawaii, Inc.
Maria Tome, Public Utilities Commission
Kirsten Turner, Ofc of US Representative Tulsi Gabbard
Alan Yamamoto, Ofc of US Senator Mazie Hirono

Testimony of Ray Starling
Chair, Energy Efficiency Working Group
Hawaii Energy Policy Forum

To the
House Committee on Finance

February 24, 2017 at 11:00 am in Conference Room 308

IN OPPOSITION TO HB1593 HD1, Relating to Energy Storage

Chair Lee, Vice-Chair Lowen, and Members of the Committee,

I am Ray Starling, Chair of the Energy Efficiency Working Group of the Hawaii Energy Policy Forum (Forum). The Forum, created in 2002, is comprised of over 40 representatives from Hawaii's electric utilities, oil and natural gas suppliers, environmental and community groups, renewable energy industry, and federal, state and local government, including representatives from the neighbor islands. Our vision and mission, and comprehensive "10 Point Action Plan" serves as a guide to move Hawaii toward its preferred energy goals and our support for this bill.

HB1593 HD1 establishes the Clean Energy Savings Jump Start Program, Clean Energy Savings Jump Start Fund, and Energy Storage System Rebate Program. It also appropriates funds, and deletes the Public Utilities Commission's approval authority relative to the Green Infrastructure Loan Program.

The Forum OPPOSES HB1593 in its current form and offers the following comments for the Committee's consideration:

(1) GEMS Original Purpose Subverted by Use of Funds for "Rebates": The bill proposes to fund "rebates" for energy storage installations using monies from the Green Energy Market Securitization (GEMS) program. However, GEMS was originally set up as a revolving "loan" program for individual ratepayers installing clean energy technologies. It was funded by \$150M in bond proceeds sold by the state, but secured by ratepayer fees in the event the loans were not paid. If the GEMS bond proceeds are diverted to "rebates" instead of "loans," the GEMS program will be unable to make the bond repayments without significantly increasing charges to all utility ratepayers. And, contrary to legislative intent the GEMS program will cease to be self-sustaining.

(2) Electric Ratepayers Unfairly Burdened: Using GEMS funds to make "rebates" for energy storage installations will tend to unfairly enhance those economically well enough off to install solar PV/storage to the disadvantage of



COLLEGE OF SOCIAL SCIENCES
HAWAII ENERGY POLICY FORUM
UNIVERSITY OF HAWAI'I AT MĀNOA

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those financially or physically unable to install PV. Since all ratepayers contribute to the GEMS funding, this would create significant unfair burden on ratepayers who could not take advantage of the energy storage rebates.

(3) Using GEMS Funds for Rebates Will Adversely Impact Energy Efficiency Programs: Because of the complex way the GEMS program was originally set up, every rebate dollar not paid back to GEMS as a loan will actually diminish the Public Benefits Fund by an equal amount, causing significant impact on Hawaii's Energy Efficiency Program, by far the most cost-effective energy resource on our grid. This reduction of Energy Efficiency funds would also jeopardize the State's ability to meet its EEPS goals.

(4) Premature to Remove PUC Oversight of GEMS Programs/Operations: The bill further proposes to remove PUC oversight from GEMS programs and operations to speed up the administrative processes. Given the challenges of the GEMS program on making loans to date, continuing to have independent PUC oversight is the more prudent and preferred approach.

Thank you for the opportunity to testify.

This testimony reflects the position of the Forum as a whole and not necessarily of the individual Forum members or their companies



Email: communications@ulupono.com

HOUSE COMMITTEE ON FINANCE
Friday, February 24, 2017 — 11:00 a.m. — Room 308

Ulupono Initiative Opposes HB 1593 HD 1, Relating to Green Infrastructure

Dear Chair Luke, Vice Chair Cullen, and Members of the Committee:

My name is Murray Clay and I am Managing Partner of the 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 reduce waste. 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 opposes HB 1593 HD 1, which establishes an energy storage system rebate program using bond funding from the Hawai'i Green Energy Market Securitization (GEMS) program. As Hawai'i's energy issues become more complex and challenging, we appreciate this committee's efforts to look at policies that support renewable energy production.

While Ulupono believes that an energy storage incentive needs to be established to meet the State's 100 percent renewable portfolio standard goal, there are more effective and prudent ways to implement the intent than the proposed rebate program. The green infrastructure special fund was established in June 2013 to provide low-cost financing for energy technology to ensure all ratepayers receive an opportunity for affordable clean energy. The rebate program complicates the repayment of the green infrastructure bonds, as there is no direct revenue-generating component from the rebate. Ulupono further feels that funding for energy programs will continue to be available and replenished if an effective loan program is implemented.

The bond legal documents and the Public Utilities Commission's (PUC) order clearly state the purpose of the funds to be loans. A "bait and switch" approach to financial markets where the State applies for funds for one reason and use them for another is going to damage our state's reputation with the investment community.

It is important to keep in mind that the GEMS program has only been operational for a year and a half. Furthermore, GEMS's loan programs were severely impeded when the PUC changed the rules to restrict Net Energy Metering for rooftop solar. Currently, the GEMS

Investing in a Sustainable Hawai'i



program is growing in the number and size of potential projects in its pipeline and is actively working on obtaining more. For example, Hawai'i Green Infrastructure Authority and the utility have been working on an on-bill repayment mechanism for GEMS funding and \$9.6 million has been committed towards a project to allow homeowners on Molokai to obtain solar hot water heaters. This pilot will leverage the new on-bill repayment mechanism to more effectively reach low and moderate-income homeowners and renters.

Energy storage is the key missing next piece for Hawai'i to meet its 100 percent renewable portfolio standard goal. Energy storage systems allow for increased adoption of all types of renewable energy generation and improve the resilience of the electrical grid. We appreciate the Legislature's desire to assist energy storage growth in Hawai'i, but we feel this strategy would not be prudent.

UluPono Initiative is supportive of revenue neutral tax credits for energy storage such as Senate Bill 665, which is working its way through the legislature, would reallocate the Renewable Energy Investment Tax Credit between solar and energy storage so that both can prosper. We believe this is a better way to achieve our State's policy objectives.

UluPono is supportive of the reduction of some of the PUC oversight to encourage more rapid deployment of loans.

Thank you for this opportunity to testify.

Respectfully,

Murray Clay
Managing Partner



HOUSE COMMITTEE ON FINANCE

February 24, 2017, 11:00 A.M.
(*Testimony is 2 pages long*)

TESTIMONY IN SUPPORT OF HB 1593 HD1, WITH A PROPOSED AMENDMENT

Aloha Chair Luke and Members of the Committee:

The Alliance for Solar Choice (TASC) respectfully supports HB 1593 HD1, relating to green infrastructure. This measure smartly incentivizes the deployment of energy storage for disadvantaged communities, a needed technology that must be deployed at greater levels if Hawaii is to achieve its aggressive clean energy goals. It also reduces unnecessary regulatory oversight over a governmental agency, which presumably already serves in the public interest.

This measure cleverly creates a rebate that goes away as energy storage technology is more broadly used and becomes more cost effective. It's a terrific way to "kickstart" an energy storage market. A similar mechanism was used in California — the California Solar Initiative — which helped initiate the current solar boom in the United States.

The source of the funding, the Green Energy Market Securitization program, was created exactly for this type of purpose: to help residents take advantage of renewable energy and energy efficiency so as to reduce his or her electric bill. The GEMS funding source arises out of the Public Benefit Fund which, for years, has provided rebates for CFLs, LEDs, and solar water heaters. Over the past three years, little of the GEMS funding has been deployed. Ratepayers are ultimately on the hook for millions of dollars of interest payments on money that isn't being used for its intended purpose. So putting the money back to its intended purposes is thoughtful and prudent effort.

From an economic perspective, this measure is needed. A recent StarAdvertiser report noted that the solar industry is reeling from the recent decision to eliminate net energy metering and require that future installations to stop exporting power out onto the grid. While the solar industries future remains bright in Hawaii, these types of drastic changes do not happen overnight. This type of measure will help with the transition. More importantly, this measure allows low and middle-income residents to become a part of the solution. To wit, they can generate clean, renewable energy and be a part of Hawaii's clean energy future.

Proposed Amendments:

TASC agrees with Blue Planet's previously submitted testimony that some level of continued oversight of GEMS authority is warranted. Thus, this language in section 5 should remain:

§ 96-64(b) The authority shall submit to the public utilities commission an annual plan for review and approval no later than ninety days prior to the start of

each fiscal year. The annual plan submitted by the authority shall include the authority's projected operational budget for the succeeding fiscal year.

We disagree, however, with the suggestion of expanding the types of eligible storage devices without some corresponding assurance that the storage meets certain minimal standards: that the technology can store a specified amount of electricity over a specific time period; has a reasonable warranty; will benefit both the customer and the electrical grid on a daily basis; etc. This is principally to ensure the Energy Storage Rebate funds are used appropriately and benefit the customer the most.

Mahalo for the opportunity to submit these comments.



February 23, 2017

Representative Sylvia Luke, Chair
Representative Ty J.K. Cullen, Vice Chair
Committee on Finance

Re: Testimony on HB 1593 HD 1 (Relating to Green Infrastructure)
Friday, Feb. 24, 2017 @ 11:00 a.m.; Conference Room 308, State Capitol

Purpose: Amber Kinetics supports an energy storage rebate program. Ambers suggests that the definition of “eligible energy storage system” be modified so that it clearly applies to energy storage technologies other than just chemical batteries. We recommend the phrase “within a battery”, be amended to “within a chemical battery or a mechanical battery, such as flywheel energy storage”.

Amber Kinetics and Flywheel Energy Storage Technology

Amber Kinetics is a California based company that has developed the first utility-scale flywheel capable of providing safe, cost-effective, four hour discharge duration energy storage to supply both capacity and ancillary services to help meet Hawaii’s renewable energy goals.

Hawaii is leading the nation with its goal of 100 percent renewable energy for electricity by 2045. We commend and support the legislature’s commitment to advancing this goal through initiatives that support renewable energy technology.

Amber Kinetics’ technology can store renewable energy for optimal dispatch, replace or defer fossil fuel peaking generation or transmission, avoid distribution upgrades, and increase the overall reliability of the grid.

Amber’s flywheel storage system acts as a mechanical battery. The storage system helps make renewable energy, such as solar, which changes its output according to the weather, be more consistent. This mechanical form of energy storage also has a number of distinct advantages relative to other storage technologies such as chemical batteries. These include unlimited cycling, no degradation, no fire risk, and no hazardous material storage or disposal needs. Our company has been awarded a 20 MW/80 MWh Energy Services Agreement with PG&E for a project in California, and has commercial units operating in the Philippines.

Amber Flywheel Demonstration Project at Campbell Industrial Park



Amber welcomes the opportunity to expand the use of our technology in Hawaii to help the State achieve its laudable renewable energy goals. In 2016, Amber and HECO signed an agreement to install an Amber flywheel at Campbell Industrial Park as a demonstration project. The flywheel is expected to be in full operation this year. Previously, we were selected for grant funding by the Hawaii-based Energy Excelsator, which is helping fund the HECO demonstration.

Comments on Definition of “Eligible Energy Storage System”

Amber generally supports rebate and tax credit programs that increase the availability of energy storage. The integration of energy storage technology is essential for Hawaii to meet its renewable energy goals. Providing for energy storage system rebates would incentivize growth of an essential component of the green energy infrastructure.

That said, Amber has concerns about HB 1593. The definition of "eligible energy storage system" in HB 1593 is both vague and narrow.

HB 1593 defines “eligible energy storage system”, in part, as “any identifiable facility, equipment, or apparatus that: (1) Receives electricity generated from another source or other sources, stores the electricity within a battery and delivers the energy back at a later time to the energy storage system user, an electric utility, or the Hawaii electric system”.

Instead of using the phrase “within a battery”, we recommend the definition be amended to make clear that an eligible energy storage system includes flywheel energy storage by being changed to "within a chemical battery or a mechanical battery, such as flywheel energy storage".

A more inclusive definition of energy storage systems will promote diversity in the energy storage market and more sustainable and efficient energy storage technologies.

Thank you for the opportunity to comment on this bill.

Sincerely,

A handwritten signature in black ink, appearing to read 'Bill Barnes', written over a light blue circular background.

Bill Barnes
Managing Director, Development

From: mailinglist@capitol.hawaii.gov
Sent: Wednesday, February 22, 2017 12:15 PM
To: FINTestimony
Cc: cochrah@gmail.com
Subject: Submitted testimony for HB1593 on Feb 24, 2017 11:00AM

HB1593

Submitted on: 2/22/2017

Testimony for FIN on Feb 24, 2017 11:00AM in Conference Room 308

Submitted By	Organization	Testifier Position	Present at Hearing
Heather Cochran	Individual	Support	No

Comments: Chair Luke, Vice Chair Cullen and members of the Committee on Finance, I, Heather Cochran, ask you to pass HB1593. The Hawaii Green Infrastructure Loan program was a good idea to allow lower income households and non-profits in the benefits of clean energy. It should now be tweaked to work better. Heather Cochran

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**Healthy Climate
Communities**

Testimony in support of HB1593 RELATING TO GREEN INFRASTRUCTURE

HOUSE COMMITTEE ON FINANCE

Hearing Friday, February 24, 2017 11 a.m.

Dear Chair Luke, Vice Chair Cullen and members of the House Committee on Finance,

Please support HB1593. By making it more affordable for HECO customers to adopt energy efficiency measures and purchase energy storage, time periods of peak demand can be evened out. The grid will require less fossil fuel generation to meet high demand times and more renewable energy can be absorbed by the grid, allowing more Hawaii residents to benefit from the low costs and clean consciences that come with using solar energy.

Mahalo,

Dr. Lisa Marten
Executive Director
Healthy Climate Communities
healthyclimate@hawaii.rr.com

From: mailinglist@capitol.hawaii.gov
Sent: Wednesday, February 22, 2017 12:30 PM
To: FINTestimony
Cc: bbreis@me.com
Subject: Submitted testimony for HB1593 on Feb 24, 2017 11:00AM

HB1593

Submitted on: 2/22/2017

Testimony for FIN on Feb 24, 2017 11:00AM in Conference Room 308

Submitted By	Organization	Testifier Position	Present at Hearing
Brijit Reis	Individual	Support	No

Comments: Chair Luke, Vice Chair Cullen and members of the Committee on Finance, Please pass House Bill 1593. Financial assistance for upgrades that help HECO customers reduce their energy needs at peak times will allow HECO to decrease fossil fuel power generation. Energy storage will transform our ability to benefit from local solar energy. The cost of energy storage is falling quickly but rebates will accelerate adoption of this new technology. Thank you, Dr. Brijit Reis

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From: mailinglist@capitol.hawaii.gov
Sent: Wednesday, February 22, 2017 12:23 PM
To: FINTestimony
Cc: alohasteph@mac.com
Subject: Submitted testimony for HB1593 on Feb 24, 2017 11:00AM

HB1593

Submitted on: 2/22/2017

Testimony for FIN on Feb 24, 2017 11:00AM in Conference Room 308

Submitted By	Organization	Testifier Position	Present at Hearing
stephanie frazier	Individual	Support	No

Comments: Aloha Chair Luke and members of the Committee on Finance, The more people that produce and store power on the grid, the fewer power plants and fuel costs all ratepayers will have to bear. This bill provides financial support to assist consumers with efficiency upgrades to reduce their electric costs, and install innovative batteries and other upgrades that will reduce costs for everyone on the electric grid. I strongly support and ask you to pass HB1593. Mahalo, Stephanie Frazier

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From: mailinglist@capitol.hawaii.gov
Sent: Wednesday, February 22, 2017 12:23 PM
To: FINTestimony
Cc: laniquinns@yahoo.com
Subject: Submitted testimony for HB1593 on Feb 24, 2017 11:00AM

HB1593

Submitted on: 2/22/2017

Testimony for FIN on Feb 24, 2017 11:00AM in Conference Room 308

Submitted By	Organization	Testifier Position	Present at Hearing
Julie Quinn	Individual	Support	No

Comments: Dear Chair Luke, Vice Chair Cullen and members of the House Committee on Finance, I ask that you pass rebates for the upgrades that help HECO customers reduce their energy needs at peak times. This will allow HECO to decrease fossil fuel power generation on the electric grid. Sincerely, Julie Quinn

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From: mailinglist@capitol.hawaii.gov
Sent: Wednesday, February 22, 2017 12:22 PM
To: FINTestimony
Cc: jlarson@lejardinacademy.org
Subject: Submitted testimony for HB1593 on Feb 24, 2017 11:00AM

HB1593

Submitted on: 2/22/2017

Testimony for FIN on Feb 24, 2017 11:00AM in Conference Room 308

Submitted By	Organization	Testifier Position	Present at Hearing
Julie Larson Hicks	Individual	Support	No

Comments: Aloha Chair Luke, Vice Chair Cullen and members of the House Committee on Finance. I ask you to pass HB1593. The more people that produce and store power on the grid, the fewer power plants and fuel costs all ratepayers will have to bear. This bill provides financial support to assist consumers with efficiency upgrades to reduce their electric costs, and install innovative batteries and other upgrades that will reduce costs for everyone on the electric grid. Mahalo, Julie Larson Hicks

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From: mailinglist@capitol.hawaii.gov
Sent: Wednesday, February 22, 2017 12:21 PM
To: FINTestimony
Cc: kittyc8571@gmail.com
Subject: Submitted testimony for HB1593 on Feb 24, 2017 11:00AM

HB1593

Submitted on: 2/22/2017

Testimony for FIN on Feb 24, 2017 11:00AM in Conference Room 308

Submitted By	Organization	Testifier Position	Present at Hearing
Catherine Courtney	Individual	Support	No

Comments: Dear Chair Luke, Vice-chair Cullen and members of the Committee on Finance, I strongly support and request that you pass HB1593. While I have solar power, I want to but cannot afford to buy batteries that could be important during power outages. With increasing frequency and intensity of tropical storms, our residents should be able to afford all technology to help be clean energy resilient. Further, the more people that produce and store power on the grid, the fewer power plants and fuel costs all ratepayers will have to bear. This bill provides financial support to assist consumers with efficiency upgrades to reduce their electric costs, and install innovative batteries and other upgrades that will reduce costs for everyone on the electric grid. Mahalo, Kitty Courtney

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From: mailinglist@capitol.hawaii.gov
Sent: Wednesday, February 22, 2017 12:20 PM
To: FINTestimony
Cc: waiyuilee@gmail.com
Subject: Submitted testimony for HB1593 on Feb 24, 2017 11:00AM

HB1593

Submitted on: 2/22/2017

Testimony for FIN on Feb 24, 2017 11:00AM in Conference Room 308

Submitted By	Organization	Testifier Position	Present at Hearing
Wai Lee	Individual	Support	No

Comments: Dear Chair Luke, Vice Chair Cullen and members of the House Committee on Finance, I strongly request that you support and ask you to pass HB1593. Thank you! A. The more people that produce and store (buffer) power on the grid, the fewer power plant and fuel costs all ratepayers will have to bear. It will reduce generation and demand fluctuations. This bill provides financial support to assist consumers with efficiency upgrades to reduce their electric cost, and install innovative batteries and other upgrades that will reduce costs for everyone on the electric grid. It will also reduce our recovery after a disaster, like storms and earthquakes. B. Energy storage will transform our ability to benefit from local solar energy. The cost of energy storage is falling quickly but rebates will accelerate adoption of this new technology. It will also reduce the need for more power lines. Thank you, Wai Lee

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From: mailinglist@capitol.hawaii.gov
Sent: Wednesday, February 22, 2017 12:19 PM
To: FINTestimony
Cc: moonierjames@gmail.com
Subject: Submitted testimony for HB1593 on Feb 24, 2017 11:00AM

HB1593

Submitted on: 2/22/2017

Testimony for FIN on Feb 24, 2017 11:00AM in Conference Room 308

Submitted By	Organization	Testifier Position	Present at Hearing
James Moonier	Individual	Support	No

Comments: Chair Luke and members of the Committee on Finance: I strongly support HB1593. Energy storage will transform our ability to benefit from local solar energy. The cost of energy storage is falling quickly but rebates will accelerate adoption of this new technology. Do it for the planet. Sincerely, Jim Moonier

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From: mailinglist@capitol.hawaii.gov
Sent: Wednesday, February 22, 2017 12:18 PM
To: FINTestimony
Cc: vickieinkailua@gmail.com
Subject: Submitted testimony for HB1593 on Feb 24, 2017 11:00AM

HB1593

Submitted on: 2/22/2017

Testimony for FIN on Feb 24, 2017 11:00AM in Conference Room 308

Submitted By	Organization	Testifier Position	Present at Hearing
Vickie Fullard-Leo	Individual	Support	No

Comments: Dear Chair Luke, Vice Chair Cullen and members of the House Committee on Finance, WE are the sunny, beautiful, Aloha State. Help protect us by supporting HB1593! The more people that produce and store power on the grid, the fewer power plants and fuel costs all ratepayers will have to bear. This bill provides financial support to assist consumers with efficiency upgrades to reduce their electric costs, and install innovative batteries and other upgrades that will reduce costs for everyone on the electric grid. Energy storage will transform our ability to benefit from local solar energy. The cost of energy storage is falling quickly but rebates will accelerate adoption of this new technology. The Hawaii Green Infrastructure Loan program was a good idea to allow lower income households and non-profits in the benefits of clean energy, but it has failed to accomplish its goals. This Bill will help put this existing fund to work for us, instead of just burdening us with interest payments. Aloha, Vlckie

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From: mailinglist@capitol.hawaii.gov
Sent: Wednesday, February 22, 2017 12:17 PM
To: FINTestimony
Cc: sksb@earthlink.net
Subject: Submitted testimony for HB1593 on Feb 24, 2017 11:00AM

HB1593

Submitted on: 2/22/2017

Testimony for FIN on Feb 24, 2017 11:00AM in Conference Room 308

Submitted By	Organization	Testifier Position	Present at Hearing
Karen Simmons	Individual	Support	No

Comments: To the Chair and members of the House Committee on Finance: I request that you support and pass HB 1593. Energy storage will transform our ability to benefit from local solar energy. The cost of energy storage is falling quickly but rebates will accelerate adoption of this new technology. Thank you, Karen Simmons

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From: mailinglist@capitol.hawaii.gov
Sent: Wednesday, February 22, 2017 12:16 PM
To: FINTestimony
Cc: donascot67@gmail.com
Subject: Submitted testimony for HB1593 on Feb 24, 2017 11:00AM

HB1593

Submitted on: 2/22/2017

Testimony for FIN on Feb 24, 2017 11:00AM in Conference Room 308

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

Comments: Esteemed Chair Luke, Vice Chair Cullen and members of the House Committee on Finance: I strongly support HB1593 and urge passage of this bill. I am an early adopter of a home photovoltaic system, and the State rebate program was big incentive for my decision to have a PV system installed. Extending the rebate program to include home storage systems will encourage me to immediately add this to my system and further my energy efficiency. The cost of energy storage is falling quickly but rebates will accelerate adoption of this new technology. This bill provides financial support to assist consumers with efficiency upgrades to reduce their electric costs, and install innovative batteries and other upgrades that will reduce costs for everyone on the electric grid. I appreciate your consideration, Scott Sullivan Kaneohe

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HOUSE COMMITTEE on Finance

TESTIMONY IN SUPPORT OF HB 1593 HD1

Aloha Committee Members:

My name is James Strange and I am a law student at the University of Hawaii at Manoa, member of the Energy Justice Program, and specialist regarding renewable energy law and policy. I am in support of HB1593 because it removes the burdensome oversight currently obstructing the successful implementation of the Green Energy Market Securitization (GEMS) program by the Hawaii Green Infrastructure authority (HGIA).

HGIA was created to administer the GEMS fund to assist the underserved in obtaining loans for the renewable energy infrastructure. This mandate effectively asked HGIA to operate as a bank, which required HGIA to create loan programs, find loan underwriters, contract with specialists to ensure consumer protection measures were met, and create relationships with Hawaii's renewable energy contractors. This process takes time, but conversely also requires quick adaptation to changing market conditions. For example, if national interest rates change, or a competitor creates a more favorable loan program, a normal bank can react quickly by designing a new program, submitting it to a loan committee, and then seeking approval from the board. This process typically takes two to three weeks. In comparison, the oversight demanded by the current laws governing GEMS can take months and is loaded with uncertainty.

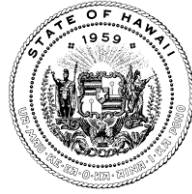
As of right now, if HGIA wants to adapt a loan program or create a loan structure to meet the demands of the market, it must submit a "program notification" to the Public Utilities Commission (PUC). This program notification appears in a docket open to several intervenors without banking or renewable energy market expertise who often create confusion. The PUC then typically takes a month to respond to the program notification, often denying HGIA's requests with little guidance or clarification. This forces HGIA to return to the drawing board and resubmit for another month-long approval process that may lead to no results.

As of January 2017, the PUC has only allowed HGIA to make small adjustments to the initial loan programs created two years ago. Proposals to expand eligibility for energy efficiency projects, fund energy storage, and create a PV leasing program were denied. If HGIA is not allowed the flexibility to find new underserved markets, then funds will continue to trickle out of the agency in small bursts under the narrow confines of programs created for energy markets that no longer dominate the renewable energy landscape.

HB 1593 corrects for this regulatory oversight and brings HGIA within the same confines as other attached agencies within the Department of Business, Economic Development, and Tourism (DBEDT) that administer and process loans to the public. Furthermore, this act will allow HGIA to function like actual green banks that exist in Connecticut and New York, who are much faster to react to market conditions and supply large amounts of capital more effectively.

Thank you for your time and attention,

James Strange



DAVID Y. IGE
GOVERNOR

SHAN S. TSUTSUI
LT. GOVERNOR

STATE OF HAWAII
OFFICE OF THE DIRECTOR
DEPARTMENT OF COMMERCE AND CONSUMER AFFAIRS
335 MERCHANT STREET, ROOM 310
P.O. Box 541
HONOLULU, HAWAII 96809
Phone Number: 586-2850
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CATHERINE P. AWAKUNI COLÓN
DIRECTOR

JO ANN M. UCHIDA TAKEUCHI
DEPUTY DIRECTOR

TO THE HOUSE COMMITTEE ON FINANCE

THE TWENTY-NINTH LEGISLATURE
REGULAR SESSION OF 2017

FRIDAY, FEBRUARY 24, 2017
11:00 A.M.

TESTIMONY OF DEAN NISHINA, EXECUTIVE DIRECTOR, DIVISION OF
CONSUMER ADVOCACY, DEPARTMENT OF COMMERCE AND CONSUMER
AFFAIRS, TO THE HONORABLE SLYVIA LUKE, CHAIR,
AND MEMBERS OF THE COMMITTEE

HOUSE BILL NO. 1593, H.D.1 - RELATING TO GREEN INFRASTRUCTURE

DESCRIPTION:

This measure proposes to establish the Clean Energy Savings Jump Start Program and Fund and the Energy Storage System Rebate Program, and amend the Green Infrastructure Loan Program by deleting the Public Utilities Commission's ("PUC" or "Commission") loan approval authority.

POSITION:

The Division of Consumer Advocacy ("Consumer Advocate") opposes this bill.

COMMENTS:

The Consumer Advocate recognizes the legislature's interest in creating a clean energy savings jump start program and an energy storage system rebate program. In order to comply with the 100% renewable portfolio standard, innovation in clean energy technology and energy storage will likely play important roles. The Consumer Advocate appreciates the legislature's intent to ensure that low- and middle-income residents are not left behind in the clean energy transition.

However, the Consumer Advocate has concerns with the proposed measure as it is likely that the intended results may not be realized. First, it is the Consumer Advocate's understanding that many low- and middle-income customers cannot afford the upfront costs of the investments that will be required; therefore, the low- and middle-income customers are not likely to be able to take advantage of the rebate. Furthermore, providing a rebate for any given resource can boost an uneconomic option over more cost-effective alternatives, which may actually stifle innovation. The Consumer Advocate believes that economics and true cost should drive the market selection of energy resources.

In addition, the large majority of utility ratepayers have been paying the Public Benefits Fee¹ as well as the Green Infrastructure Fee, both of which have supported the Hawaii green infrastructure special fund, through their monthly utility bills. However, by appropriating funds toward the described programs in this measure from the Hawaii green infrastructure special fund, such a rebate program would be contrary to the design of the Hawaii green infrastructure special fund since any rebate would not replenish the fund. As originally envisioned, GEMS beneficiaries would repay the GEMS loans such that the special fund would be replenished and repay the amounts taken from the Public Benefits Fund. As a result, if rebates are granted, it is likely that additional contributions from ratepayers will be required.

Furthermore, the proposal to remove Commission approval of the rebate program raises concerns whether adequate consumer protections can be exercised, if necessary. Given that the GEMS program is essentially insured by general ratepayer contributions to the green infrastructure fund, it is important that there is adequate oversight in place to ensure the use of the funds is in the interest of all ratepayers who have made and will continue to make contributions to GEMS and not just in the interest of direct program beneficiaries.

The Consumer Advocate notes that the proposed measure attempts to ensure, to some degree, that the energy storage systems will be interconnected to the grid. Should the Committee choose to move this measure forward, this is an important public interest provision that should be retained.

Thank you for this opportunity to testify.

¹ On electric bills, this appears as the PBF Surcharge.



Hawaii Solar Energy Association
Serving Hawaii Since 1977

**TESTIMONY OF THE HAWAII SOLAR ENERGY ASSOCIATION
IN REGARD TO HB 1593 HD1, RELATING TO GREEN INFRASTRUCTURE
BEFORE THE
HOUSE COMMITTEE ON FINANCE
ON
FRIDAY, FEBRUARY 24TH, 2017**

Chair Luke, Vice-Chair Cullen, and members of the committee, my name is Hajime Alabanza and I represent the Hawaii Solar Energy Association, Inc. (HSEA)

HSEA **supports** HB 1593 HD1. This measure seeks to broaden the scope of the Green Energy Market Securitization (GEMS) program by allowing the GEMS authority to accelerate the energy storage market by strategically deploying funds to the “clean energy savings jump start” program.

Introduction and General Comments:

As Hawaii transitions away from traditional grid-tied PV systems without energy storage to a market that requires the use of energy storage, the need to maintain a sustainable and low cost market for all residents of the state has never been more imperative.

Currently, there are no state incentives for battery storage systems. Customers who want to lower their bill as well as assist the state’s goals to a 100% Renewable Portfolio Standard are now met with a higher cost to do so. Although energy storage costs continue and are projected to decline at an exponential rate¹, Hawai’i’s energy policy is ahead of the curve. The PUC’s October 2015 decision to end the Net Energy program, combined with the Customer Grid Supply cap being met in late 2016, means that only one viable program (Customer Self Supply) exists for residential customers to connect to the grid. Although the PUC, utility, and several key stakeholders are negotiating a longer-term strategy for residential PV, this will most likely require energy storage in some form. Additionally, the HGIA Authority overseeing GEMS also contends that energy storage is essential to its mission, stating in their recent quarterly report:

“The Authority believes that its ability to finance storage is critical, especially given the limited interconnection options currently offered by the utility. The Authority is working closely with the CA's office in developing a response to address Its concerns. At the request of the CA, two revised Program Notifications will be submitted, separately addressing the consumer and commercial energy storage technology.”²

¹ See Deutsche Bank Solar Report attached

² HGIA Quarterly Report, filed in PUC Docket No. 2014-0135 January 31st, 2017



Hawaii Solar Energy Association
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The legislature has stated several times that its goal is to help make PV available to all people in the state, especially those at the middle and lower income levels. It has also implemented programs such as Community Based Renewable Energy to meet this goals. Unfortunately, requiring an additional expensive component to residential PV systems as a means to interconnect to the grid without providing an appropriate incentive will only result in two things: those fortunate enough to afford it who do not already have a system may grid defect due to cost, or low to middle income people who cannot afford it will opt out and continue paying high energy bills.

This trend is already evident in data regarding the solar industry in Hawai'i. Since the beginning of the CSS tariff a total of 563 projects have been proposed or approved. For reference, over 3,000 CGS systems were proposed or approved in half that time. As the market slows down, local people and local business, not huge national companies or wealthy snow birds, will suffer. Without a program like HB 1593 is proposing, what kind of market is likely to be left by the time battery prices have become more affordable? It is absolutely imperative that the state provide an incentive to customers if it hopes to have a market that will benefit all people, regardless of income.

Specific comments:

In order to expedite the process by which the GEMS authority can deploy funds for the proposed rebate program, overarching approval by the Public Utilities Commission should be removed. This control is detailed in the Hawaii Revised Statutes, §196-64.

Although the Public Utilities Commission is a competent and professional regulatory arm of the state of Hawai'i, removing them from the burden of having to approve every deployment of funds by the GEMS authority will allow it more time to focus on its primary mission. Additionally, having GEMS seeks approval from the PUC on every deployment of funds it seeks to make over complicates the matter and ultimately slows the progress towards a 100% RPS by 2045

Additionally, we suggest a cap amount of total deployed funds to this program to not exceed \$50,000,000. The HSEA believes that this is an appropriate amount of money to be allocated to this program while still allowing the HGIA funds to power other programs that helps its mission in serving the underserved. We suggest the following changes be made:

There is appropriated out of the Hawaii green infrastructure special fund established pursuant to section 196-65, Hawaii Revised Statutes, or any other eligible funds procured by the Hawaii green infrastructure authority, a sum up to **\$50,000,000** or so much thereof as may be necessary for fiscal year 2017-2018 to be deposited



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into the clean energy savings jump start fund established pursuant to section 196-A, Hawaii Revised Statutes.

SECTION 13. There is allocated out of the clean energy savings jump start program fund, the sum of **\$40,000,000** or so much thereof as may be necessary for fiscal year 2017-2018 for the energy storage system rebate program.

The additional \$10,000,000 should be allocated to energy efficiency, education, and heat abatement programs as seen fit by the HGIA.

We urge the committee to pass HB 1593.

Thank you for the opportunity to testify.