

TESTIMONY OF RANDY IWASE
CHAIR, PUBLIC UTILITIES COMMISSION
STATE OF HAWAII
TO THE
HOUSE COMMITTEE ON
ENERGY AND ENVIRONMENTAL PROTECTION

February 7, 2017
9:30 am

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

Chair Lee and Members of the Committee:

DESCRIPTION:

This measure would establish the clean energy savings jump start program and fund. This measure would also establish the energy storage system rebate 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 ("DBEDT") with respect to the proposal to establish a rebate program for energy storage systems.

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. Designating monies from the Hawaii Green Infrastructure Special Fund for a rebate rather than a loan 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

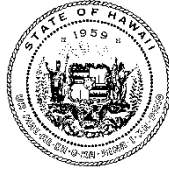
H.B. No. 1593

Page 2

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



SARAH ALLEN
ADMINISTRATOR
MARA SMITH
ASSISTANT ADMINISTRATOR

**STATE OF HAWAII
STATE PROCUREMENT OFFICE**

P.O. Box 119
Honolulu, Hawaii 96810-0119
Tel: (808) 586-0554
email: state.procurement.office@hawaii.gov
<http://spo.hawaii.gov>
Twitter: [@hawaiispo](https://twitter.com/hawaiispo)

TESTIMONY
OF
SARAH ALLEN, ADMINISTRATOR
STATE PROCUREMENT OFFICE

TO THE HOUSE COMMITTEE
ON
ENERGY AND ENVIRONMENTAL PROTECTION

February 7, 2017, 9:30 a.m.

HOUSE BILL 1593
RELATING TO GREEN INFRASTRUCTURE

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

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 15, lines 10 to 12, which states: (5) "Enter into contracts for the administration of the loan program, without the necessity of complying with 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.



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
Fax Number: 586-2856
www.hawaii.gov/dcca

CATHERINE P. AWAKUNI COLÓN
DIRECTOR
JO ANN M. UCHIDA TAKEUCHI
DEPUTY DIRECTOR

TO THE HOUSE COMMITTEE ON ENERGY & ENVIRONMENTAL PROTECTION

THE TWENTY-NINTH LEGISLATURE
REGULAR SESSION OF 2017

TUESDAY, FEBRUARY 7, 2017
9:30 A.M.

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

HOUSE BILL NO. 1593 - 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, without subsidies, should drive the market selection of energy resources.

In addition, all 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 towards 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. However, some of the exceptions related to the grid connection of systems using the rebate program appear to be counter to the interests of ratepayers in general. For instance, the proposal to allow a rebate for a system to a property that is not interconnected means that the property owner has not been paying the Public Benefits Fee nor the Green Infrastructure Fee. Thus, allowing such a participant means that this participant will be entirely subsidized by ratepayers and no grid benefit will result.

Thank you for this opportunity to testify.

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



DAVID Y. IGE
GOVERNOR

GWEN S. YAMAMOTO LAU
EXECUTIVE DIRECTOR

HAWAII GREEN INFRASTRUCTURE AUTHORITY

No. 1 Capitol District Building, 250 South Hotel Street, Suite 501, Honolulu, Hawaii 96813
Mailing Address: P.O. Box 2359, Honolulu, Hawaii 96804
Web site: gems.hawaii.gov

Telephone: (808) 587-3868
Fax: (808) 587-3896

AMENDED

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

BEFORE THE HOUSE COMMITTEE ON ENERGY AND ENVIRONMENTAL PROTECTION

TUESDAY, FEBRUARY 7, 2017
9:30 A.M.

STATE CAPITOL, CONFERENCE ROOM 325

HOUSE BILL NO. 1593
RELATING TO GREEN INFRASTRUCTURE

Chair Lee, Vice Chair Lowen and Members of the Energy and Environmental Protection Committee:

Thank you for the opportunity to testify on House Bill 1593, 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") supports the intent of this bill and 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).

While the cost of storage has and will continue to decrease, at present it still may not be currently economically feasible for a low-income household to invest in a solar PV system with the added cost of storage. Therefore, limiting all of the appropriated funds specifically to storage rebates may not benefit a portion of the ratepayer population identified as the underserved. However, expanding the clean energy savings jump start program to also include benefits that may be better suited for this target group, such as energy education and credit enhancements, as well as clean energy demonstration projects for affordable multi-family rental projects, will enable the funds to also reach and benefit this population. Thus we suggest the following changes below.

SECTION 2. Chapter 196, Hawaii Revised Statutes, is amended by adding two new sections to part IV to be appropriately designated and to read as follows:

§196-A Clean energy savings jump start program; clean energy savings jump start fund. (a) There is established a clean energy savings jump start program that shall be administered by the Hawaii green infrastructure authority in a manner consistent with this part. The authority, in collaboration with others, shall expend moneys on rebate and other programs that rapidly advance state goals of clean energy-and energy efficiency, with a focus on serving low- and middle income residents.

(d) There is established in the state treasury a special fund the clean energy savings jump start fund, into which shall be deposited appropriations from the legislature.

(e) Moneys in the clean energy savings jump start fund shall be used for the following purposes:

- (1) Making jump start rebate program payments pursuant to this part, which may include but not be limited to rebates, energy education, energy demonstration projects for affordable multi-family rental projects, and credit enhancements (i.e. loan loss reserves, interest rate buy-downs, etc.);
- (2) Paying the authority's administrative costs for operating the clean energy savings jump start program; and
- (3) Paying the authority's administrative costs for operating the clean energy savings jump start fund.

SECTION 11. (a) The legislature finds and declares that the benefits of the jump start program, which may include by not be limited to the issuance of rebates energy education, energy demonstration projects for affordable multi-family rental projects, and credit enhancements under this Act is in the public interest and for the public health, safety, and welfare.

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. Additionally, as the rebates will be paid for via an appropriation out of the Hawaii green infrastructure special fund, another requirement should be that financing is provided by GEMS. Lastly, we have found that it is common to have a number of families residing together in a dwelling, as such, when determining the income levels of the applicant's household, we must consider all of household members to determine the combined household income. Thus we suggest the following changes 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 and financed by GEMS.

(c) The amount of rebate allowed for each eligible energy storage system shall not exceed the applicable cap amount, which shall be:

(1) \$ _____ per system for single-family residential property; provided that:

- (A) If the combined federal adjusted gross income of household members of the energy storage system user is \$75,000 or less for single filers, or \$150,000 or less for joint filers, in the preceding tax year in which the rebate is claimed, then the energy storage system property owner shall be eligible to receive _____ per cent of the rebate;
- (B) If the combined federal adjusted gross income of household members of the energy storage system user is greater than \$75,000 but less than \$150,000 for single filers, or is greater than \$150,000 but less than \$300,000 for joint filers, in the preceding tax year in which the rebate is claimed, then the energy storage system property owner shall be eligible to receive _____ per cent of the rebate; or
- (C) If the combined federal adjusted gross income of household members of the energy storage system user is greater than \$150,000 for single filers, or

greater than \$300,000 for joint filers, in the preceding tax year in which the rebate is claimed, then the energy storage system property owner is eligible to receive _____ per cent of the rebate;

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 changes 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:~~

(A) ~~Does not offer, at the time of purchase of the energy storage system, electric service to the property that would be served by the energy storage system; or~~

(B) ~~Has proposed interconnection fees of ten per cent or greater of the purchase price of the energy storage system.~~

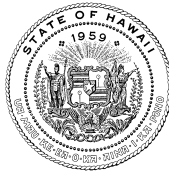
While the GEMS program has suffered setbacks, the Authority's deployment of loan funds, which began in January 2016, has gained positive momentum that is expected to continue consistently over the remainder of the current fiscal year. The Authority expects to end fiscal 2017 with up to \$60.0 million in GEMS loans funded and/or approved and committed. Repurposing a substantial amount of the remaining \$86.0 million GEMS funds available would essentially eliminate the opportunity for future loans under the Authority's on-bill repayment program, currently under development, as well as for other noteworthy clean energy projects. As such, the Authority is proposing that no more than \$20.0 million be appropriated out of the Hawaii green infrastructure special fund for the clean energy savings jump start fund. Additionally, the Authority is also proposing that if it is successful in procuring other sources of funds, that these [other] funds be deposited into the clean energy savings jump start fund in lieu of the Hawaii green infrastructure special fund in order to preserve as much of the remaining \$66.0 million in the GEMS fund for future loans. Out of the \$20.0 million appropriated \$10.0 million could be allocated for energy storage rebates and the remaining \$10.0 million could be allocated for other clean energy savings jump start program benefits. 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 fund(s) procured by the Hawaii green infrastructure authority, a the sum up to of \$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 ~~appropriated~~ 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.

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
HONOLULU, HAWAII 96810-0150

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 ENERGY AND ENVIRONMENTAL PROTECTION
ON
HOUSE BILL NO. 1593

February 7, 2017
9:30 a.m.
Room 325

RELATING TO GREEN INFRASTRUCTURE

House Bill No. 1593 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, 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.



February 6, 2017

Representative Chris Lee, Chair
Representative Nicole E. Lowen, Vice Chair
Committee on Energy & Environmental Protection

Re: Testimony on HB 1593 (Relating to Green Infrastructure)
Tuesday, Feb. 7, 2017 @9:30 a.m.
Conference Room 325, State Capitol

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 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

A REVOLUTION IN ENERGY STORAGE

32920 Alvarado-Niles Rd., Ste. 250, Union City, CA 94587

AmberKinetics.com



demonstration.

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.

Amber supports the concept of an energy storage rebate program, but 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', is written over a light blue horizontal line.

Bill Barnes
Managing Director, Development



HOUSE COMMITTEE ON ENERGY & ENVIRONMENTAL PROTECTION

Feb. 7, 2017, 9:30 A.M.
Room 325
(Testimony is 4 pages long)

COMMENTS ON HB 1593

Aloha Chair Lee, Vice Chair Lowen, and Committee members:

Blue Planet Foundation strongly supports addressing regulatory barriers that have slowed progress with the now-accelerating Green Energy Market Securitization (GEMS) loan program. With examples like a recent approval to finance thousands of solar water heating systems on Molokai, GEMS is developing the power to transform underserved corners of the state's clean energy transition. We also strongly support taking steps to accelerate the market for energy storage. The development of a robust energy storage industry to serve local residents and businesses is a key component for strengthening the security of Hawai'i's energy industry, and minimizing its environmental impact.

However, we have some concerns about HB 1593 as drafted, if it threatens to derail the ability of the GEMS program to finance clean energy solutions. We also believe that portions of the bill's preamble do not provide a full picture of GEMS' developing success and its need for a more efficient regulatory framework, and should therefore be amended. For these reasons, **we suggest several amendments** to the bill.

GEMS' DEVELOPING SUCCESS

GEMS has been developed as a way to fill underserved gaps and lower the cost of clean energy financing. Moreover, the program has been pointed squarely at addressing the needs of low-income and moderate-income energy customers. **To date, more than 90% of the energy upgrades financed by GEMS have been provided for the benefit of low-income and middle-income consumers.**¹

The development of GEMS has not been an easy process, as the program—and its governing regulatory framework—have been developed, tested, and improved. Thankfully, the program has turned a corner, and the regulatory process is becoming more efficient. Similarly, revisions to the GEMS program offerings² have spurred increased interest, with **more than \$100 million**

¹ This information was provided at the Hawaii Energy Policy Forum's legislative briefing in January 2017.

² Such as a lower interest rate, which is fixed regardless of the consumer's credit score. *Id.*

in projects in the pipeline, and an anticipated \$60 million in clean energy financing to be deployed this year.³

On January 27, 2017, the Hawaii Green Infrastructure Authority approved using up to \$9.6 million of GEMS funds to finance solar hot water projects on Molokai. This type of program has a transformative power to reshape the energy landscape on Molokai, by reducing energy demand, lowering energy costs, and providing more consumer options. This can only happen if GEMS retains its ability to finance such projects.

THE NEED FOR A MORE EFFICIENT REGULATORY FRAMEWORK

Generally, ensuring that GEMS continues to grow and fulfill its powerful promise should mean expanding the options for consumers to use GEMS financing, for key solutions such as energy efficiency, energy storage, and solar power. To this end, a number of new consumer options are under development, or have already been filed with the PUC. For example, in July 2016 the program filed a notification with the PUC regarding its solar + energy storage loan product. However, that program was suspended by the PUC in August 2016.

In its most recent quarterly report, the GEMS program noted that the ability to finance energy storage is “critical” to fulfilling its mission. We agree. We also share the program’s hope that its prior program notification regarding energy storage (and other notifications, such as for energy efficiency) will soon be able to proceed with PUC approval.

This highlights that for *at least* some of the GEMS offerings, detailed regulatory approval processes may be duplicative, and may needlessly slow the program. For example, one might question whether or why a regulatory filing, with responses by the Consumer Advocate etc., would be needed to finance solar water heating systems on Molokai. HB 1593 would remove the delay caused by this extra layer of regulatory process.

As a comparison, consider that the Public Benefits Fee Administrator (PBFA) does not file a program notification with the PUC to detail each new program offering or strategy as it becomes available. Instead, the PBFA files an annual plan for approval. This same approach may be reasonable for GEMS oversight—particularly considering that the original GEMS legislation created the GEMS authority board to provide program oversight. This renders detailed PUC oversight at least partially duplicative.

PROTECTING GEMS’ ABILITY TO PROVIDE CLEAN ENERGY FINANCING

With respect to the clean energy jumpstart concept, we must remember that **GEMS is designed as a loan program**. When funds are deployed, the expectation is that they will be repaid by the consumer, and thus can be rolled over into a new loan. This expands the pool of consumers that can benefit from GEMS. This concept is fundamental to the original legislative intent of the program, and it is critical to its long-term success in helping low-income and middle-

³ *Id.*

income customers. In contrast, a rebate program would not be repaid, and once the funds are expended GEMS could no longer serve its target. Thus, HB 1593 must balance the need to accelerate the energy storage market (and accelerate GEMS' ability to serve the storage market), with the need to protect a sufficiently large portion of its funds for its original intent.

SUGGESTED AMENDMENTS

For the above reasons, we suggest the following alterations to the bill:

1. **Authorize below-cost energy storage financing or other mechanisms that will complement the GEMS loan model.** Rather than requiring GEMS to issue simply rebates that may quickly eat away at the funds available for GEMS financing, the program could be authorized to issue below-cost financing for approved energy storage projects. That financing could help to support the energy storage market, while preserving a larger portion of the GEMS funds that can be rolled over into additional loans and enable more and more consumers to benefit. Alternatively, rebates could be authorized, but only for energy upgrades financed with GEMS funds. Such an approach would ensure that the rebates would serve in a complementary role to GEMS financing.
2. **Expand to cover all forms of energy storage.** The current draft limits eligible energy storage devices to batteries. Other forms of energy storage (e.g. mechanical energy storage, thermal energy storage) can be equally valuable to the grid, and should also be encouraged. In Section 3, we suggest replacing the phrase "~~within a battery~~" with the phrase "within a chemical, mechanical, or thermal energy storage device." And deleting this phrase: "~~(3) Has a deployable capacity of at least 2.5 kilowatts of continuous battery charge and discharge power and at least five kilowatt-hours of stored energy at time of purchase for residential and commercial energy storage systems.~~"
3. **Retain the requirement for annual reporting to the PUC.** While relief from unnecessary portions of the regulatory process can help to make GEMS more effective and flexible to serve the needs of its target market, it seems reasonable to retain annual reporting, analogous to the PBFA. Thus, this portion of Section 5 should not be deleted:

§ 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.

4. **Clarify portions of the preamble in Section 1, as follows:**

The legislature further finds that the failure of duplicative layers of oversight have slowed the development of the Hawaii

~~green infrastructure loan program to achieve in fully achieving its intended result has resulted in most ratepayers paying for the program without reaping the benefits. Rather than obtaining immediate relief from high electric power rates, ratepayers are instead having to pay the debt service on a loan that is not being effectively deployed. This is particularly true for low- to middle-income homeowners, renters, churches, and nonprofit organizations, the people and entities that the green infrastructure loan program was primarily intended to benefit~~

Thank you for this opportunity to provide comments.



we make life better®

Chairman Chris Lee
House Committee on Energy & Environmental Protection
Hawaii State Legislature
415 South Beretania Street
Honolulu, Hawaii 96813

Chairman Lee,

On behalf of the Air-Conditioning, Heating, and Refrigeration Institute (AHRI), I would like to express our gratitude for the opportunity to provide written testimony on HB 1593, relating to Green Infrastructure.

AHRI is the trade association representing manufacturers of HVACR and water heating equipment within the global industry. AHRI's 300+ member companies manufacture quality, efficient, and innovative residential and commercial air conditioning, space heating, water heating, and commercial refrigeration equipment and components for sale in North America and around the world.

Our members also produce energy storage systems that would be eligible for rebates under the newly created Clean Energy Savings Jump Start Program proposed in HB 1593. Our members' energy storage systems are an excellent source of clean and efficient energy that can help Hawaii meet its renewable energy goals.

AHRI suggests that the Committee amend the definition for Energy Storage Systems in HB 1593 to mirror the definition of these systems included in Senator Inouye's SB 361. We believe SB 361's language is more reflective and inclusive of the types of systems that could be used for the intended rebate and energy savings.

Additionally, we have suggested to Senator Inouye's staff that an amendment to include language that would allow the Hawaii State Energy Office the ability to add technologies as they become commercially available and appropriate for credits or a rebate program is also appropriate. This would save the trouble of re-legislating the list of approved technologies, while also allowing for new and improved technologies to be used for energy savings in the future.

AHRI supports the overall concept of HB 1593, but also supports the adoption of the suggestions above. If you have any questions, please do not hesitate to contact me through email at gmcguire@ahrinet.org or by phone at (703) 600-0312.

Best regards,

A handwritten signature in black ink, appearing to read "Garrett McGuire". The signature is fluid and cursive.

Garrett McGuire
Director, Government Relations



P.O. Box 37158, Honolulu, Hawai`i 96837-0158
Phone: 927-0709 henry.lifeoftheland@gmail.com

COMMITTEE ON ENERGY & ENVIRONMENTAL PROTECTION

Rep. Chris Lee, Chair

Rep. Nicole E. Lowen, Vice Chair

DATE: Tuesday, February 7, 2017

TIME: 9:30 am

PLACE: Conference Room 325

RE: HB 1593 RELATING TO GREEN INFRASTRUCTURE.

OPPOSE

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

The bill appears to be trying to find a use for the GEMS money. However, Hawai`i Energy would be a better fit for the desired goal of establishing a clean energy rebate.

Hawaii Green Infrastructure Authority (HGIA) offers loans which must be paid back to cover bonds, while Hawai`i Energy receives funds through electric bill and offers rebates.¹

Currently all GEMS programs require Public Utilities Commission approval. The review occurs in a docket. Life of the Land is a party to the proceedings. This bill proposes to strip the Commission of the authority to review matters, and to strip Life of the Land of its ability to monitor the program and to offer advice to the Commission

Mahalo,

Henry Curtis
Executive Director

¹ <https://hawaiienergy.com/for-homes/rebates>



Before the House Committee on Energy & Environmental Protection
Tuesday, February 7, 2017; 9:30 a.m., Room 325
HB 1593: Relating to Green Infrastructure

Aloha Chair Lee, Vice Chair Lowen, 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 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, with a special focus on underserved customers. This means that all types of energy storage

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.

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.

Finally, HB 1593 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 makes use of existing funds in a measured and predictable way.

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.

Thank you for the opportunity to testify

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



HOUSE COMMITTEE ON ENERGY & ENVIRONMENTAL PROTECTION

February 7, 2017, 9:30 A.M.
(*Testimony is 1 page long*)

TESTIMONY IN SUPPORT OF HB 1593

Aloha Chair Lee and Members of the Committee:

The Alliance for Solar Choice (TASC) respectfully supports HB 1593, 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.

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, energy storage, 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 two years, virtually none 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.

From an economic perspective, this measure is critically 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. Hundreds, if not thousands, of employees have been put out of work. If we want to maintain an industry that has provided a substantial number of construction jobs — through a economic recession — we need to give the industry the time to make a healthy 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.

Mahalo for the opportunity to submit these comments.



Hawaii Solar Energy Association
Serving Hawaii Since 1977

**TESTIMONY OF THE HAWAII SOLAR ENERGY ASSOCIATION
IN REGARD TO HB 1593, RELATING TO GREEN INFRASTRUCTURE
BEFORE THE
HOUSE COMMITTEE ON ENERGY AND ENVIRONMENTAL PROTECTION
ON
TUESDAY, FEBRUARY 7th, 2017**

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

HSEA **supports** HB 1593. 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.

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.

¹ See Deutsche Bank Solar Report attached



Hawaii Solar Energy Association
Serving Hawaii Since 1977

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 urge the committee to pass HB 1593.

Thank you for the opportunity to testify.

From: mailinglist@capitol.hawaii.gov
Sent: Friday, February 3, 2017 3:58 PM
To: EEPtestimony
Cc: mendezj@hawaii.edu
Subject: *Submitted testimony for HB1593 on Feb 7, 2017 09:30AM*

HB1593

Submitted on: 2/3/2017

Testimony for EEP on Feb 7, 2017 09:30AM in Conference Room 325

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

Comments:

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HOUSE COMMITTEE ON FINANCE

March 2, 2016, 11 A.M.
Room 308
(Testimony is 1 page long)

TESTIMONY IN SUPPORT OF HB 1593 HD1

Aloha Chair Luke, Vice Chair Nishimoto, and 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

From: mailinglist@capitol.hawaii.gov
Sent: Monday, February 6, 2017 5:05 PM
To: EEPtestimony
Cc: jlarson@lejardinacademy.org
Subject: Submitted testimony for HB1593 on Feb 7, 2017 09:30AM

HB1593

Submitted on: 2/6/2017

Testimony for EEP on Feb 7, 2017 09:30AM in Conference Room 325

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

Comments: 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 Kaneohe

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From: mailinglist@capitol.hawaii.gov
Sent: Monday, February 6, 2017 5:01 PM
To: EEPtestimony
Cc: kittyc8571@gmail.com
Subject: Submitted testimony for HB1593 on Feb 7, 2017 09:30AM

HB1593

Submitted on: 2/6/2017

Testimony for EEP on Feb 7, 2017 09:30AM in Conference Room 325

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

Comments: Dear Chair Lee, Vice Chair Lowen and Committee on Energy and Environmental Protection Members, 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 Kailua

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From: mailinglist@capitol.hawaii.gov
Sent: Monday, February 6, 2017 4:55 PM
To: EEPtestimony
Cc: waiyulee@gmail.com
Subject: Submitted testimony for HB1593 on Feb 7, 2017 09:30AM

HB1593

Submitted on: 2/6/2017

Testimony for EEP on Feb 7, 2017 09:30AM in Conference Room 325

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

Comments: Dear Chair Lee, Vice Chair Lowen and members of the House Committee on Energy and Environmental Protection, 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. C. 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. Sincerely, Wai Lee

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From: mailinglist@capitol.hawaii.gov
Sent: Monday, February 6, 2017 4:51 PM
To: EEPtestimony
Cc: moonierjames@gmail.com
Subject: Submitted testimony for HB1593 on Feb 7, 2017 09:30AM

HB1593

Submitted on: 2/6/2017

Testimony for EEP on Feb 7, 2017 09:30AM in Conference Room 325

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

Comments: Dear Committee on Energy and Environmental Protection members, 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. Please pass this bill for the good of Hawaii and the planet. Sincerely, Jim Moonier

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From: mailinglist@capitol.hawaii.gov
Sent: Monday, February 6, 2017 4:45 PM
To: EEPtestimony
Cc: vickieinkailua@gmail.com
Subject: Submitted testimony for HB1593 on Feb 7, 2017 09:30AM

HB1593

Submitted on: 2/6/2017

Testimony for EEP on Feb 7, 2017 09:30AM in Conference Room 325

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

Comments: Members of the Committee on Energy and Environmental Protection, 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, Vickie

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From: mailinglist@capitol.hawaii.gov
Sent: Monday, February 6, 2017 4:40 PM
To: EEPtestimony
Cc: sksb@earthlink.net
Subject: Submitted testimony for HB1593 on Feb 7, 2017 09:30AM

HB1593

Submitted on: 2/6/2017

Testimony for EEP on Feb 7, 2017 09:30AM in Conference Room 325

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

Comments: Aloha Chair Lee, Vice Chair Lowen and Members of the House Committee on Energy and Environmental Protection, 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 Oahu

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From: mailinglist@capitol.hawaii.gov
Sent: Monday, February 6, 2017 4:36 PM
To: EEPtestimony
Cc: donascot67@gmail.com
Subject: Submitted testimony for HB1593 on Feb 7, 2017 09:30AM

HB1593

Submitted on: 2/6/2017

Testimony for EEP on Feb 7, 2017 09:30AM in Conference Room 325

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

Comments: Esteemed Chair Lee, Vice Chair Lowen and Members of the House Committee on Energy and Environmental Protection: 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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From: mailinglist@capitol.hawaii.gov
Sent: Monday, February 6, 2017 4:05 PM
To: EEPtestimony
Cc: lisamarten@hawaii.rr.com
Subject: Submitted testimony for HB1593 on Feb 7, 2017 09:30AM

HB1593

Submitted on: 2/6/2017

Testimony for EEP on Feb 7, 2017 09:30AM in Conference Room 325

Submitted By	Organization	Testifier Position	Present at Hearing
Lisa Marten	Individual	Support	No

Comments: Dear Chair Lee, Vice Chair Lowen and members of the House Committee on Energy and Environmental Protection, 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, Lisa Marten Kailua Resident

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From: mailinglist@capitol.hawaii.gov
Sent: Monday, February 6, 2017 10:40 PM
To: EEPtestimony
Cc: alohasteph@mac.com
Subject: Submitted testimony for HB1593 on Feb 7, 2017 09:30AM

HB1593

Submitted on: 2/6/2017

Testimony for EEP on Feb 7, 2017 09:30AM in Conference Room 325

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

Comments: Aloha committee members, 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: Tuesday, February 7, 2017 10:59 PM
To: EEPtestimony
Cc: tika_bean@hotmail.com
Subject: Submitted testimony for HB1593 on Feb 7, 2017 09:30AM

HB1593

Submitted on: 2/7/2017

Testimony for EEP on Feb 7, 2017 09:30AM in Conference Room 325

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

Comments: Aloha, my name is Erica Scott and I am a Makiki resident and I strongly support this bill.

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From: mailinglist@capitol.hawaii.gov
Sent: Tuesday, February 7, 2017 7:49 AM
To: EEPtestimony
Cc: laniquinns@yahoo.com
Subject: Submitted testimony for HB1593 on Feb 7, 2017 09:30AM

HB1593

Submitted on: 2/7/2017

Testimony for EEP on Feb 7, 2017 09:30AM in Conference Room 325

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

Comments: Dear Chair Lee, Vice Chair Lowen and EEP Members, 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. Please support HB1593. Aloha, Julie Quinn

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From: mailinglist@capitol.hawaii.gov
Sent: Wednesday, February 8, 2017 10:38 AM
To: EEPtestimony
Cc: crystalkpaul@yahoo.com
Subject: *Submitted testimony for HB1593 on Feb 9, 2017 11:00AM*

HB1593

Submitted on: 2/8/2017

Testimony for EEP on Feb 9, 2017 11:00AM in Conference Room 325

Submitted By	Organization	Testifier Position	Present at Hearing
Crystal Kia Paul	Individual	Support	No

Comments:

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LATE

Email: communications@ulupono.com

HOUSE COMMITTEE ON ENERGY & ENVIRONMENTAL PROTECTION
Thursday, February 9, 2017 — 11:00 a.m. — Room 325

Ulupono Initiative Opposes HB 1593, Relating to Green Infrastructure

Dear Chair Lee, Vice Chair Lowen, 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, 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% 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. With an effective loan program, Ulupono further feels that funding for energy programs will continue to be available and replenished.

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

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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% 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.

However, 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

LATE

Hello,

My name is Kim from Nuuanu, and I am writing in support of HB1593.

I'm excited to see the city moving towards funding green infrastructure -
reducing loads on our stormwater systems.

Dr. Kim Falinski



HOUSE COMMITTEE ON ENERGY AND ENVIRONMENTAL PROTECTION

Thursday, February 9, 2017, 11:00AM

IN SUPPORT OF HB1593, Relating to Renewable Energy

Aloha Chair Lee and members of the EEN Committee,

The Sierra Club of Hawai'i strongly **supports** the intent HB1593. 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 dormant funds.

Currently, there are no state incentives for battery storage systems. In order for the people of Hawai'i to lower their high electricity bills as well as do their part to assist the State's goals to a 100% Renewable Portfolio Standard, there must be a mechanism to incent change. Hawai'i has one of the highest residential adoptions of solar photovoltaic (PV) in the United States, but low and middle income residents continue to be unable to afford such systems.

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. The legislature has also implemented programs such as Community Based Renewable Energy to meet this goal. 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.

Citizens of the state have a right to be able to generate their own power, as well as choose where that power comes from. HB1593 empowers the people of Hawai'i to make this choice, and opens the energy market to an even wider swath of people.

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 Hawai'i Revised Statutes, §196-64.

Although the Public Utilities Commission (PUC) 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 seek approval from the PUC on every deployment of funds it seeks,

over complicates the matter and ultimately slows the progress towards a 100% RPS by 2045. We believe that all language pertaining to PUC oversight of the GEMS authority should be removed from §196-64.

Lastly, we urge the legislature to consider a cap amount of \$35,000,000 of the total GEMS fund to be allocated to this program, thereby allowing GEMS to retain funding for other projects such as those laid out in Program Notification #10. We also recommend that this program only be applied to low and middle income residents making less than \$75,000 as a single filer or less than \$125,000 for a joint filer. This will allow a more strategic deployment of funds to an often overlooked segment of the population, as well as remaining in-line with the HGIA's mission to serve the underserved.

Thank you very much for this opportunity to provide testimony on this important issue.

Mahalo,
Marti Townsend
Director

LATE

To: The Honorable Chris Lee, Chair
and members of the House Committee on Energy & Environmental
Protection

Date: February 9, 2017

Time: 11:00 A.M.

Place Conference Room 325, State Capitol

From: Mark Ida
Resident and Voter

Position: **SUPPORT**

Re: H.B. 1593, Relating to Energy Storage.

In order to reach the goal of 100% renewable energy by 2045, I support the concept of this bill. Given the move by the utility to no longer allow the exporting of energy produced by customers, batteries have become a necessity when installing photovoltaic systems.

It is my belief that when GEMS starts to allow batteries as part of their loan program to customers, taxpayers will see many more consumers taking advantage of this great program. Because of HECO's hard line stance against customers exporting any power from their PV systems, thus necessitating a battery, it should be no wonder that GEMS has slowed to a crawl.

Thank you for the opportunity to provide comments.