

# HB 1593, HD1

RELATING TO GREEN INFRASTRUCTURE.

Establishes the Clean Energy Savings Jump Start Program, Clean Energy Savings Jump Start Fund, and Energy Storage System Rebate Program. Deletes the Public Utilities Commission's approval authority relative to the Green Infrastructure Loan Program. Appropriates funds.  
(HB1593 HD1)



DAVID Y. IGE  
GOVERNOR

LUIS P. SALAVERIA  
BOARD CHAIR

## HAWAII GREEN INFRASTRUCTURE AUTHORITY

No. 1 Capitol District Building, 250 South Hotel Street, 5th Floor, Honolulu, Hawaii 96813  
Mailing Address: P.O. Box 2359, Honolulu, Hawaii 96804

Telephone: (808) 587-3868

TESTIMONY OF LUIS P. SALAVERIA  
BOARD CHAIR, HAWAII GREEN INFRASTRUCTURE AUTHORITY  
DIRECTOR, DEPARTMENT OF BUSINESS, ECONOMIC DEVELOPMENT & TOURISM

BEFORE THE SENATE COMMITTEES ON TRANSPORTATION AND ENERGY  
and  
COMMERCE, CONSUMER PROTECTION, AND HEALTH

WEDNESDAY, MARCH 22, 2017  
1:15 P.M.  
STATE CAPITOL, CONFERENCE ROOM 225

HOUSE BILL NO. 1593 HD1  
RELATING TO GREEN INFRASTRUCTURE

Chairs Inouye and Baker, Vice Chairs Dela Cruz and Nishihara, and Members of the Transportation and Energy, and Commerce, Consumer Protection and Health Committees:

The Department of Business, Economic Development & Tourism **strongly supports** Sections 4 through 10 of House Bill 1593 HD1, relating to green infrastructure as well as the position of the Hawaii Green Infrastructure Authority in regards to this bill.

Thank you for this opportunity to testify.



DAVID Y. IGE  
GOVERNOR

GWEN S. YAMAMOTO LAU  
EXECUTIVE DIRECTOR

## HAWAII GREEN INFRASTRUCTURE AUTHORITY

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WRITTEN TESTIMONY OF GWEN YAMAMOTO LAU  
EXECUTIVE DIRECTOR, HAWAII GREEN INFRASTRUCTURE AUTHORITY  
BEFORE THE SENATE COMMITTEES ON TRANSPORTATION AND ENERGY  
and  
COMMERCE, CONSUMER PROTECTION, AND HEALTH

WEDNESDAY, MARCH 22, 2017  
1:15 P.M.  
STATE CAPITOL, CONFERENCE ROOM 225

HOUSE BILL NO. 1593 HD1  
RELATING TO GREEN INFRASTRUCTURE

Chairs Inouye and Baker, Vice Chairs Dela Cruz and Nishihara, and Members of the Transportation and Energy, and Commerce, Consumer Protection and Health Committees:

The Hawaii Green Infrastructure Authority ("Authority") **strongly supports** Sections 4 through 10 of House Bill 1593 HD1, relating to green infrastructure and offer suggestions on Sections 2, 3, 5, 12 and 13. This bill proposes to eliminate Public Utilities Commission oversight of the program to encourage more rapid deployment of loans and to create a clean energy savings jump start program. The Authority 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 only 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.~~**

As the original legislation envisioned GEMS to be a loan fund which generates a repayment stream, and as the Authority is committed to replenishing these funds, it is imperative that (1) the Authority be allowed to re-invest and re-loan GEMS funds collected to redeploy into additional loans, enabling it to recoup funds allocated to the clean energy jump start fund over time; and (2) the amount appropriated to the clean energy jump start fund should be limited to a manageable level at which the Authority would be able to replenish these funds. Thus we suggest the following changes below.

SECTION 5. Section 196-64, Hawaii Revised Statutes, is amended to read as follows:  
**§196-64 Functions, powers, and duties of the authority.** In performance of, and with respect to the functions, powers, and duties vested in the authority by this part, the authority, as directed by the director, may:

- (1) Make ~~the GEMS loans fund~~ **a revolving fund, from which payments collected are redeployed and reinvested into new loans,** ~~and~~ expending funds to finance the purchase of installation of green infrastructure equipment for clean energy technology, demand response technology, and energy use reduction and demand side management infrastructure, programs, and services;

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.

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 March 16, 2017, \$14.0 million in GEMS funds have been committed.

Further, while the PUC Decision and Order requires 51% of the funds to benefit the “underserved,<sup>1</sup>” to date, 87% of the loans funded benefit this target group. 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.

Thank you for this opportunity to testify.

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<sup>1</sup> Defined as renters, low and moderate-income households and nonprofits.



DAVID Y. IGE  
GOVERNOR  
SHAN S. TSUTSUI  
LT. GOVERNOR

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TO THE SENATE COMMITTEE ON TRANSPORTATION AND ENERGY  
AND  
TO THE SENATE COMMITTEE ON COMMERCE, CONSUMER  
PROTECTION, AND HEALTH

THE TWENTY-NINTH LEGISLATURE  
REGULAR SESSION OF 2017

WEDNESDAY, MARCH 22, 2017  
1:15 P.M.

TESTIMONY OF DEAN NISHINA, EXECUTIVE DIRECTOR, DIVISION OF  
CONSUMER ADVOCACY, DEPARTMENT OF COMMERCE AND CONSUMER  
AFFAIRS, TO THE HONORABLE LORRAINE R. INOUE, CHAIR,  
TO THE HONORABLE ROSALYN H. BAKER, CHAIR  
AND MEMBERS OF THE COMMITTEES

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 Fee<sup>1</sup> 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. 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. As long as the GEMS program is funded or guaranteed by general ratepayers, Commission oversight should be a prerequisite of the program.

The Consumer Advocate notes that Section 3 of 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 and strengthened. If any general ratepayer supported funds will be used to finance an energy storage system, that system must remain connected to the grid in a manner that benefits, to the extent possible, the grid as a whole. Allowing a ratepayer funded system to leave or not be connected to the grid is not reasonable. Thus, the Consumer Advocate recommends that the caveat in part (8) ("unless the electric utility has proposed interconnection fees of ten per cent or greater of the purchase price of the energy storage system") of the proposed definition for "Eligible energy storage system", should be removed.

Thank you for this opportunity to testify.

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<sup>1</sup> On electric bills, this appears as the PBF Surcharge.

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**  
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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 SENATE COMMITTEE ON TRANSPORTATION AND ENERGY  
AND COMMERCE, CONSUMER PROTECTION, AND HEALTH  
ON  
HOUSE BILL NO. 1593, H.D. 1

**March 22, 2017**  
**1:15 p.m.**  
**Room 225**

**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, including whether the proposed program changes comply with the requirements of the Green Energy Market Securitization Program Order.

Thank you for your consideration of our comments.



DAVID Y. IGE  
GOVERNOR



SARAH ALLEN  
ADMINISTRATOR  
MARA SMITH  
ASSISTANT ADMINISTRATOR

**STATE OF HAWAII  
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TESTIMONY  
OF  
SARAH ALLEN, ADMINISTRATOR  
STATE PROCUREMENT OFFICE  
  
TO THE SENATE COMMITTEES  
ON  
TRANSPORTATION AND ENERGY  
AND  
COMMERCE, CONSUMER PROTECTION AND HEALTH

March 22, 2017, 1:15 p.m.

HOUSE BILL 1593, HD1  
RELATING TO GREEN INFRASTRUCTURE

Chairs Inouye and Baker, Vice-Chairs Dela Cruz and Nishihara, 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.

TESTIMONY OF RANDY IWASE  
CHAIR, PUBLIC UTILITIES COMMISSION  
STATE OF HAWAII  
TO THE  
SENATE COMMITTEES ON  
TRANSPORTATION AND ENERGY  
&  
COMMERCE, CONSUMER PROTECTION, AND HEALTH

March 22, 2017  
1:15 p.m.

**MEASURE:** H.B. No. 1593, H.D. 1

**TITLE:** RELATING TO GREEN INFRASTRUCTURE

Chair Inouye, Chair Baker, and Members of the Committees:

**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 Committees' 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 moneys 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.



**Healthy Climate  
Communities**

**Testimony in support of HB1593 RELATING TO GREEN INFRASTRUCTURE**

**COMMITTEE ON TRANSPORTATION AND ENERGY**

**COMMITTEE ON Commerce, Consumer Protection, and Health**

**Hearing Friday, March 22, 2017 1:15pm**

Dear Inouye, Chair Baker and Members of the Committees,

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, unpolluted air, and clean consciences that come with using solar energy.

Mahalo,

Dr. Lisa Marten  
Executive Director  
Healthy Climate Communities  
[healthyclimate@hawaii.rr.com](mailto:healthyclimate@hawaii.rr.com)

**From:** mailinglist@capitol.hawaii.gov  
**Sent:** Monday, March 20, 2017 12:56 PM  
**To:** TRE Testimony  
**Cc:** sid@pvtechhi.com  
**Subject:** Submitted testimony for HB1593 on Mar 22, 2017 13:15PM

**HB1593**

Submitted on: 3/20/2017

Testimony for TRE/CPH on Mar 22, 2017 13:15PM in Conference Room 225

| <b>Submitted By</b>   | <b>Organization</b> | <b>Testifier Position</b> | <b>Present at Hearing</b> |
|-----------------------|---------------------|---------------------------|---------------------------|
| Isidro Gono Villaflor | PV Tech             | Support                   | No                        |

Comments: TESTIMONY OF PV TECH IN REGARD TO HB 1593 HD1, RELATING TO GREEN INFRASTRUCTURE BEFORE THE SENATE COMMITTEE ON TRANSPORTATION AND ENERGY AND SENATE COMMITTEE ON COMMERCE, CONSUMER PROTECTION, AND HEALTH ON WEDNESDAY, MARCH 22, 2017 Chair Inouye, Chair Baker, and members of the joint committee, my name is ISIDRO VILLAFLO and I represent the PV TECH. PV TECH 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. 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 rate , 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. 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. 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. We urge the committee to pass HB 1593 HD1. Thank you for the opportunity to testify.

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

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HAWAII ENERGY CONNECTION™  
Sustainable Energy Solutions

kumukit™  
Hybrid Solar Electricity

**TESTIMONY OF HAWAII ENERGY CONNECTION  
IN REGARD TO HB 1593 HD1, RELATING TO GREEN INFRASTRUCTURE  
BEFORE THE  
SENATE COMMITTEE ON TRANSPORTATION AND ENERGY AND SENATE COMMITTEE ON  
COMMERCE, CONSUMER PROTECTION, AND HEALTH  
ON  
WEDNESDAY, MARCH 22, 2017**

Aloha Chairs Inouye and Baker, Vice Chairs Dela Cruz and Nishihara, and members of the Committees,

Hawaii Energy Connection 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.

Fueled by a passion to accelerate the adoption of renewable energy in Hawaii, our locally owned company has become a nationally recognized solar integrator, dedicated to affordable energy solutions. We are proud to say that 2017 marks our 10th anniversary of serving the citizenry of Hawaii. The latest version of our popular KumuKit systems now employ the latest technologies to optimize energy usage with smart energy management and energy storage. Although these new products are technically what is needed to achieve the goal of a 100% renewable energy future, actual sales of these new products have been low due to the additional cost of the energy storage component.

Over the past 10 years we have reinvested our success back into the local community so that we can continue providing jobs and affordable energy solutions for many more years to come. We humbly ask for your support on this important bill so we can continue our mission.

Sincerely,  
Chris DeBone  
Managing Partner  
Hawaii Energy Connection, LLC





**Testimony**

**In SUPPORT OF THE INTENT of HB 1593  
RELATING TO GREEN INFRASTRUCTURE**

**Before the  
SENATE COMMITTEE ON TRANSPORTATION AND ENERGY  
and the  
COMMITTEE ON COMMERCE, CONSUMER PROTECTION AND HEALTH**

**Wednesday, March 22, 2017 1:15 p.m.**

Aloha Chair Inouye, Chair Baker, Vice-Chair Dela Cruz, Vice Chair Nishihara and members of the Committees.

I Brandie Leathers , Owner of Your Energy Inc. **support** the **intent** of the Energy Storage System Rebate Program contained in **HB 1593** to incentivize Hawaii power customers' investments in energy storage and new renewable generation, and to bring back hundreds of renewable energy jobs lost during the last 2 years.

I invite the Committees to consider **amending HB 1593** to provide that:

- the Energy Storage System Rebate Program be a rebate program administered by the public benefits fee administrator pursuant to HRS section 269-122, and
- the Energy Storage System Rebate Program be funded through the public benefits fee pursuant to HRS section 269-121.

**Amending HB 1593** to provide an energy storage rebate paid out of the Public Benefits Fee (PBF), instead of the Green Energy Market Securitization (GEMS) fund, would be consistent with the purpose of the PBF, and would not alter the legislature's intended purpose of the GEMS fund.

Thank you for allowing me to testify in **support** of the **intent** of **HB 1593** and to offer comments for **amending HB 1593**.

Brandie Leathers  
Owner, Your Energy Inc. LLC.  
Principal & CEO, V2 Energy Solutions, LLC.  
530 863 8090  
brandie@yourenergyinc.com

# photonworks

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## ENGINEERING

Before the Senate Committee on Transportation and Energy & the Senate Committee on Commerce, Consumer Protection, and Health

Wednesday, March 22, 2017; 1:15 p.m., Room 225

HB 1593 HD 1: Relating to Green Infrastructure

Aloha Chairs Inouye and Baker, Vice Chairs Dela Cruz and Nishihara, and members of the Committees,

On behalf of Photonworks Engineering, 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.

We are a local design build contractor that specialized in renewable energy projects including solar and storage. We are dedicating to helping Hawaii achieve its renewable energy goals.

By implementing an energy storage energy incentive this will greatly speed up the adoption of energy storage system in addition to renewable forms of generation. Hawaii is at a crossroads and needs to continue to be leader in the adoption of renewable energy on to the grid. The only way to do this is to integrate energy storage on the grid and make those resources available to the grid. Without storage it will be technically impossible to achieve 100% renewable energy as mandated by law. Just as solar needed help to make it available to consumers at a cost competitive price so does energy storage. By incentivizing storage, it will bring mass adoption and help to drive costs down to a point where incentives are no longer needed to make economic sense. It obviously makes sense for the environment. The "Holy Grail" of renewable energy is energy storage. Please make the dream of 100% renewable energy for Hawaii a reality. The entire solar industry is left in limbo until this energy storage situation is figured out. Many companies have closed shop and nearly all companies have had to lay off workers due the dramatic slowdown in the solar industry. Please help put people back to work and support this bill to promote energy storage.

Thank you for the opportunity to testify.



Paul Orem

CEO

PhotonWorks Engineering LLP



**Testimony of ERIK KVAM**  
**Director of Renewable Energy Action Coalition of Hawaii**  
e-mail: [Erik.Kvam@REACHhawaii.org](mailto:Erik.Kvam@REACHhawaii.org)

**In SUPPORT OF THE INTENT of HB 1593**  
**RELATING TO GREEN INFRASTRUCTURE**

**Before the**  
**SENATE COMMITTEE ON TRANSPORTATION AND ENERGY**  
**and the**  
**COMMITTEE ON COMMERCE, CONSUMER PROTECTION AND HEALTH**

**Wednesday, March 22, 2017 1:15 p.m.**

Aloha, Chair Inouye, Chair Baker, Vice-Chair Dela Cruz, Vice Chair Nishihara and members of the Committees.

My name is Erik Kvam. I am a Director of Renewable Energy Action Coalition of Hawaii (REACH). REACH is a trade association whose vision is a Hawaiian energy economy based 100% on renewable sources indigenous to Hawaii.

100% renewable energy means energy security, energy resiliency and environmental preservation benefits for all Hawaiians.

REACH **SUPPORTS** the **INTENT** of the Energy Storage System Rebate Program contained in **HB 1593** to incentivize Hawaii power customers' investments in energy storage and new renewable generation, and to bring back hundreds of renewable energy jobs lost during the last 2 years.

REACH offers **COMMENTS** inviting the Committees to consider **AMENDING HB 1593** to provide that:

- the Energy Storage System Rebate Program be a rebate program administered by the public benefits fee administrator pursuant to HRS section 269-122, and
- the Energy Storage System Rebate Program be funded through the public benefits fee pursuant to HRS section 269-121.

**AMENDING HB 1593** to provide an energy storage rebate program paid out of the Public Benefits Fee (PBF), instead of the Green Energy Market Securitization (GEMS) fund, would be congruent with the purpose of the PBF, and would not alter the legislature's intended purpose of the GEMS fund.

Thank you for allowing me to testify in **SUPPORT** of the **INTENT** of **HB 1593** and to offer **COMMENTS** for **AMENDING HB 1593**.



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TESTIMONY OF JOHN CROUCH ON BEHALF OF ERS, A RENEWABLE ENERGY COMPANY  
BASED IN HAWAII, BEFORE THE  
SENATE COMMITTEE ON TRANSPORTATION AND ENERGY

**In SUPPORT of HB 1593 RELATING TO GREEN INFRASTRUCTURE**

**Wednesday, March 22, 2017 1:15 P.M. Room 225**

Aloha, Senator Lorraine R. Inouye, Chair: Senator Donovan M. Dela Crus, Vice Chair and members of the Committee, my name is John Crouch. I have been involved in the design and installation of renewable energy projects in Hawaii since the first large unit at Mauna Lani Bay Hotel and Bungalows in 1998 and the first large scale PV project in Hawaii, 2008, on Lana'i composed of 1.5MW of PV to supply 30% of the daytime load.

ERS is in **SUPPORT** of **HB 1593**

The inclusion of "Storage Rebates" into the tax credit legislation is essential to further promotion of the use of renewables in meeting our State goals of electrical self-sufficiency. We have made exceptional strides in the establishment of PV and Wind as viable replacements of fossil fuels by providing tax credit incentives to encourage private investment in the renewable energy industry.

We need to expand on the use of renewables by providing similar tax credit incentives for the storage component of reaching our State energy goals.

This bill will clarify that "Storage" qualifies for State tax credits.

**HB 1593 – Is important as a tool to help us reach our goals of energy security sooner than later.**

Thank you for allowing me to testify.

John Crouch  
883-9411



Before the Senate Committee on Transportation and Energy & the Senate Committee on Commerce, Consumer Protection, and Health

Wednesday, March 22, 2017; 1:15 p.m., Room 225

HB 1593 HD 1: Relating to Green Infrastructure

Aloha Chairs Inouye and Baker, Vice Chairs Dela Cruz and Nishihara, and members of the Committees,

On behalf of Green Charge, I would like to testify in strong support for HB 1593 HD 1 which will help establish the energy savings necessary to effectively jump start a commercial and school storage program and will also provide the necessary support distributed generation projects currently facing a slow-down.

Green Charge is a market leader in behind-the-meter energy storage, teaming up with local solar installers in multiple states since 2009 to provide consumer savings which are reinvested locally. The majority of Green Charge projects are on schools, providing environmental and economic benefits to the whole community. Founded in 2009, Green Charge has gained valuable technical and policy insights, having worked closely with numerous utilities and regulators in storage pilot programs, behind the meter storage program design processes, demonstration projects, deployment partnership arrangements.

As a fast-responding and flexible asset, energy storage solutions will play critical roles in helping Hawaii achieve its 100% clean energy and greenhouse gas emissions goals by capturing and discharging energy from renewables, empowering customers to make smart decisions with their energy use, supporting grid needs such as ramping and voltage support, and reducing the need to rely on high emissions power sources. Simply put, this storage rebate program will help “bridge the gap” for commercial and school solar projects that can no longer participate in net metering. Thank you for the opportunity to testify and please feel free to contact me at [wwright@greencharge.net](mailto:wwright@greencharge.net)

Walker Wright  
Vice President of Public Policy  
Green Charge <http://www.greencharge.net/>

**From:** mailinglist@capitol.hawaii.gov  
**Sent:** Tuesday, March 21, 2017 12:02 PM  
**To:** TRE Testimony  
**Cc:** chad.bundy@hotmail.com  
**Subject:** \*Submitted testimony for HB1593 on Mar 22, 2017 13:15PM\*

**HB1593**

Submitted on: 3/21/2017

Testimony for TRE/CPH on Mar 22, 2017 13:15PM in Conference Room 225

| <b>Submitted By</b> | <b>Organization</b>           | <b>Testifier Position</b> | <b>Present at Hearing</b> |
|---------------------|-------------------------------|---------------------------|---------------------------|
| Chad Bundy          | Hawaii Energy Consulting, LLC | Support                   | No                        |

Comments:

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

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Before the Senate Committee on Transportation and Energy & the Senate Committee on  
Commerce, Consumer Protection, and Health  
Wednesday, March 22, 2017; 1:15 p.m., Room 225  
HB 1593 HD 1: Relating to Green Infrastructure

Aloha Chairs Inouye and Baker, Vice Chairs Dela Cruz and Nishihara, and members of the  
Committees,

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 Hawaii’s 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, supplemental  
reserves and regulating reserves<sup>1</sup>, 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 will be a key driver in Hawaii’s clean  
energy development.<sup>2</sup>

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.

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<sup>1</sup> See Docket No. 2015-0412 Demand Response Pilot Project currently underway.

<sup>2</sup> 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.



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 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. At this point, development in renewables has slowed significantly due to costs of adding energy storage, and HB 1593 HD 1 will help remedy this obstacle by providing a much needed boost towards investment costs. 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

**Testimony**

**In SUPPORT OF THE INTENT of HB 1593  
RELATING TO GREEN INFRASTRUCTURE**

**Before the  
SENATE COMMITTEE ON TRANSPORTATION AND ENERGY  
and the  
COMMITTEE ON COMMERCE, CONSUMER PROTECTION AND HEALTH**

**Wednesday, March 22, 2017 1:15 p.m.**

Aloha Chair Inouye, Chair Baker, Vice-Chair Dela Cruz, Vice Chair Nishihara and members of the Committees.

I **support** the **intent** of the Energy Storage System Rebate Program contained in **HB 1593** to incentivize Hawaii power customers' investments in energy storage and new renewable generation, and to bring back our employees who have suffered the last two years due to lack of work. Our employees have faithfully served the renewable energy of Hawaii since 1976, and now face the reality of closing our doors.

I invite the Committees to consider **amending HB 1593** to provide that:

- the Energy Storage System Rebate Program be a rebate program administered by the public benefits fee administrator pursuant to HRS section 269-122, and
- the Energy Storage System Rebate Program be funded through the public benefits fee pursuant to HRS section 269-121.

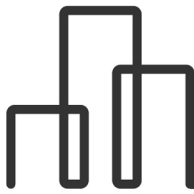
**Amending HB 1593** to provide an energy storage rebate paid out of the Public Benefits Fee (PBF), instead of the Green Energy Market Securitization (GEMS) fund, would be consistent with the purpose of the PBF, and would not alter the legislature's intended purpose of the GEMS fund.

May I suggest reviewing the California Self Generation Incentive Program. Hawaii should be in the forefront of solar generation and storage for the residential taxpayers as well as the business generators.

Aloha,

Paul Spencer

Sun King Hawaii



**WRITTEN ONLY**

TESTIMONY OF MANAL YAMOUT  
VICE PRESIDENT, POLICY & MARKETS  
ADVANCED MICROGRID SOLUTIONS

BEFORE THE

SENATE COMMITTEE ON TRANSPORTATION & ENERGY  
SENATE COMMITTEE ON COMMERCE, CONSUMER PROTECTION & HEALTH

March 22, 2017  
1:15 P.M.

**MEASURE:** HOUSE BILL NO. 1593 HD1  
**TITLE:** RELATING TO GREEN INFRASTRUCTURE

**POSITION:** **Advanced Microgrid Solutions strongly supports passage of HB 1593 HD1**

**COMMENTS:**

Chairs Inouye and Baker, Vice Chairs Dela Cruz and Nishihara and Members of the Committees:

On behalf of Advanced Microgrid Solutions (AMS), thank you for the opportunity to testify on House Bill 1593 HD1, related to green infrastructure. HB 1593 HD1 would encourage the more rapid deployment of loans and create a clean energy savings jump start program for advanced energy storage technologies directly serving Hawai'i residents and businesses.

Today, AMS submits testimony in support of HB 1593 HD1. HB 1593 HD1 would allow significant benefits to Hawaii's energy infrastructure, consumer protection, ratepayer savings and business development goals. Importantly, it would allow for advanced clean energy technology companies, such as AMS, to be market entrants, bringing with them millions of dollars in local investments and tax benefits and hundreds of direct and indirect jobs for Hawai'i. This is particularly important as the State moves toward 100 percent renewable generation by 2045. Energy storage will be a critical component in reaching the Hawaii's clean energy goal; however, energy storage cannot support these goals without key policy and economic drivers, like HB 1593 HD1.

AMS is one of the nation's leading energy storage companies, with over 120 megawatts (MW) of storage projects under contract with electric utilities throughout the United States. We are currently building a 90 MW / 360 MWh fleet for Southern California

Edison that will provide capacity for load-constrained parts of their electric grid following the unexpected closure of one of their power plants. As a company, AMS designs, finances, installs and operates energy storage and software systems for large-scale commercial and industrial customers. We specialize in customer-sited projects that also provide grid support to local utilities and grid operators. The flexibility of energy storage as a grid resource allows it to provide increased grid reliability, ratepayer savings and participation in capacity or ancillary services markets. Our installation sizes range from 250 kilowatts (kW) to 2.5 MW – enough to help large electricity consumers, such as Hawaii’s universities, hospitals and government buildings, save hundreds of thousands of dollars in annual electricity costs.

HB 1593 HD1 is critical for companies, like AMS, looking to make significant business and economic investments in Hawai’i. Now more than ever, energy storage can provide a variety of important resources to Hawai’i as it moves toward a cleaner, more affordable and reliable grid. That is why we encourage Members of the Senate Committee on Transportation & Energy and the Senate Committee on Commerce, Consumer Protection & Health to vote YES on HB 1593 HD1.

Thank you for the opportunity to testify.

Regards,

Manal Yamout  
Vice President, Policy & Markets  
Advanced Microgrid Solutions



Before the Senate Committee on Transportation and Energy & the Senate Committee on Commerce, Consumer Protection, and Health  
Wednesday, March 22, 2017; 1:15 p.m., Room 225  
HB 1593 HD 1: Relating to Green Infrastructure

Aloha Chairs Inouye and Baker, Vice Chairs Dela Cruz and Nishihara, and members of the Committees,

On behalf of Stem, Inc. (Stem), I would like to testify in strong support for HB 1593 HD 1 which establishes the energy savings jump start program and an energy storage rebate program.

The bill will modify the Hawaii Green Infrastructure Loan program and direct funds towards the creation of the Energy Storage Market Acceleration Program. The premise of the bill is to utilize existing state funding to support customer adoption of grid-connected energy storage systems. This new program will provide solutions for both the electricity grid and the installer business community via the new, high-growth sector of energy storage.

Stem is a leading provider of advanced energy storage in Hawaii and across the mainland. Stem is currently partnered with Hawaiian Electric Company ("HECO") on a 1MW renewables integration pilot to help the utility reach the State's lofty renewable energy goals. As part of this pilot, Stem is the first company to successfully complete HECO's Standard Interconnection Process with a grid-responsive, advanced energy storage system. Stem is also the first aggregator of multiple customer-sited energy storage systems in Hawaii, now operating a "virtual power plant" for the Oahu grid.

Stem is also working with the Hawaiian Electric Companies on a data availability project for the public schools across all islands in the Hawaiian Electric Companies service territory. This project involves providing a "super smart meter" for three years to all public schools for both educational and responsible energy investment purposes.

#### I. HB 1593 HD1 will encourage private investment to upgrade the grid

This bill provides a strong market signal that the State of Hawaii is committed to supporting customer adoption of clean energy. Stem strongly believes that many consumers and businesses will be looking to adopt energy storage over the next few years. These systems can help reduce energy costs and provide other benefits, such as resiliency, back-up power, grid capacity and ancillary services. HB 1593 HD1 will help consumers bring down the upfront costs of adopting these systems, while leveraging private capital to finance the remaining costs, ensuring all Hawaiians have access to energy storage.

**This bill encourages connected systems that strengthen the grid.** This bill will motivate those considering energy storage systems to invest in grid-connected systems



rather than fully off-grid systems. The State will see the deployment of private capital on energy storage systems with an emphasis on interconnected systems that can support the grid. This means that private capital is also being leveraged to upgrade the grid – rather than rate payers carrying the entire burden of those upgrades.

## II. HB 1593 HD1 supports Hawaii’s long term energy and climate goals

With an RPS goal of 100% by 2045, it is clear that Hawaii’s electrical grid is going to need technologies that support the integration and reliability of intermittent renewable energy resources. Also, that state has some of the highest penetrations of roof-top solar anywhere in the U.S., which means that consumers are now playing a direct role in the continued stability of the grid. This bill will help consumers and businesses adopt grid-connected energy storage systems that, when aggregated, can act as a “virtual power plant” resource for grid operators. These systems can play a vital role in solving the “duck curve”, and other related issues that come from high penetrations of variable renewables.

The value of supporting the adoption of distributed storage is that these systems will be located at customer’s facility at the end of the distribution feeder line where they can best be utilized to relieve distribution congestion. With distributed storage’s ability to provide benefits to the customer, as well as to the grid, it lowers the overall cost of maintaining the grid and reduces costs for all ratepayers.

## III. HB 1593 HD1 will provide economic development opportunities

This bill not only supports the development of a local workforce focused on the deployment of stand-alone energy storage, it also provides the solar industry the opportunity to expand into a new line of work: installing storage systems along with PV solar systems. This can be a key driver to developing a grid resource that provides resilience and security, serves the needs of a changing electricity grid, and creates local Hawaiian jobs.

Thank you for the opportunity to provide this testimony.

A handwritten signature in black ink, appearing to read "Tad Glauthier". The signature is fluid and cursive, with a large loop at the end.

Tad Glauthier  
VP of Hawaii Operations  
Stem, Inc.



## **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  
SENATE COMMITTEE ON TRANSPORTATION AND ENERGY  
AND THE  
SENATE COMMITTEE ON COMMERCE, CONSUMER PROTECTION, AND  
HEALTH  
ON  
WEDNESDAY, MARCH 22<sup>ND</sup>, 2017**

Chair Inouye, Chair Baker, and members of the joint committees, 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 rate<sup>1</sup>, 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

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<sup>1</sup> See Deutsche Bank Solar Report attached



## **Hawaii Solar Energy Association**

*Serving Hawaii Since 1977*

will be submitted, separately addressing the consumer and commercial energy storage technology.”<sup>2</sup>

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:

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





**Hawaii Solar Energy Association**  
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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 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 also suggest that the definition of “eligible energy storage property” as defined on page 10 and 11 of the most recent draft HD1 is overly prescriptive. The HSEA remains agnostic on the type of energy storage technology deployed in the state. As such, outlining such specific technical requirements to qualify for the proposed rebate may inadvertently preclude new or current technology from participating in the rebate program. According to this draft, *at least 5, if not more, current energy storage technologies are precluded from participation in this program.* Greater discussion should be had as to the technical requirements regarding this proposed program. Cutting out certain technologies also cuts out customers who may not be able to afford higher initial capital costs of larger capacity storage products. Accordingly, HSEA proposes the following amendments to allow for a greater range of options:

“Eligible energy storage system” means 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;

(2) Is fixed to a residential or commercial property and electrically connected to an energy storage system user's load or generation, or in the case of a utility-



**Hawaii Solar Energy Association**  
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scale energy storage system, is fixed to a property and electrically connected to an eligible community-based renewable energy project;

~~(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;~~

(4) Has a minimum deployable capacity of 2.5 megawatt-hours and five megawatt-hours at time of purchase for utility-scale energy storage systems;

(5) Is protected by a manufacturer's warranty of at least ten years or a minimum of three thousand cycles for residential and commercial energy storage systems;

(6) Is protected by a manufacturer's warranty of at least twenty years with a degradation not to exceed 1.5 per cent per year and controls sufficient to provide real power and reactive power dispatch for utility-scale energy storage systems;

(7) Is not owned by an electric utility; and

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

We urge the committee to pass HB 1593 HD1.

Thank you for the opportunity to testify.

**From:** mailinglist@capitol.hawaii.gov  
**Sent:** Tuesday, March 21, 2017 12:18 PM  
**To:** TRE Testimony  
**Cc:** erica.dahl@vivintsolar.com  
**Subject:** Submitted testimony for HB1593 on Mar 22, 2017 13:15PM

**HB1593**

Submitted on: 3/21/2017

Testimony for TRE/CPH on Mar 22, 2017 13:15PM in Conference Room 225

| <b>Submitted By</b> | <b>Organization</b> | <b>Testifier Position</b> | <b>Present at Hearing</b> |
|---------------------|---------------------|---------------------------|---------------------------|
| Erica Dahl          | Vivint Solar        | Support                   | No                        |

Comments: TESTIMONY OF VIVINT SOLAR IN REGARD TO HB 1593 HD1, RELATING TO GREEN INFRASTRUCTURE BEFORE THE SENATE COMMITTEE ON TRANSPORTATION AND ENERGY AND SENATE COMMITTEE ON COMMERCE, CONSUMER PROTECTION, AND HEALTH ON WEDNESDAY, MARCH 22, 2017 Chair Inouye, Chair Baker, and members of the joint committee, my name is Erica Dahl and I represent Vivint Solar. Vivint Solar 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. 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 rate , 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. 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. 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. We urge the committee to pass HB 1593 HD1. Thank you for the opportunity to testify.

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

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**TESTIMONY IN SUPPORT WITH AMENDMENTS OF HB 1593, HD1  
being heard by the Senate Committee on Transportation and Energy and the Senate  
Committee on Commerce, Consumer Protection and Health  
on Wednesday, March 22, 2017 at 1:15 p.m.  
In Conference Room 225**

Aloha Chairs Inouye and Baker and members of the respective Committees:

Thank you for providing the opportunity to provide testimony in support of HB 1593 HD1. This bill would repurpose a portion of the funding from the Hawaii Green Infrastructure Loan Program, also known as the Green Energy Market Securitization (GEMS) Program, to provide rebates to support the deployment of energy storage systems.

Tesla supports this legislation and believes that policy measures such as those proposed in HB 1593 HD 1 can play a pivotal role in transforming the market for energy storage, by helping the industry scale and drive costs down to the point where incentives are no longer needed. We respectfully suggest amendments that we believe would help make the incentives in the envisioned program even more effective.

We expect energy storage will play a very significant role in Hawaii's energy system in the years and decades ahead. In the context of high penetrations of renewables, both distributed and utility scale, energy storage represents an increasingly important asset class that can help integrate these resources into the system. Energy storage effectively transforms intermittent renewables that generate energy based on the rising and setting of the sun or the vagaries of the wind, into a fully dispatchable resource that is available when it is needed by the grid and customers. As Hawaii transitions toward a future where 100% of the State's energy needs are met from renewables, it is vitally important that the State take steps today to support the deployment of energy storage systems.

In addition to the fundamental role that energy storage can play in facilitating increased renewable adoption, energy storage also creates a more dynamic and efficient grid. When deployed behind the customer meter, it enables customers to more easily respond to time-of-use rates or other dynamic tariff and demand response programs. Similarly, grid operators can utilize energy storage to help more effectively and efficiently address system needs, by strategically locating storage and using it as an alternative to more conventional and bulky investments in transmission and distribution facilities, or additional generation.

Projects utilizing battery storage technology hold significant promise that has yet to be fully realized because of two factors – the current cost of battery systems, and the limited number of use cases or applications that the existing regulatory framework allows storage systems to address, despite their technical capacity to do so today. It is expected that significant progress



will be made on both fronts over the next three to five years as the production capacity for batteries continues to increase and economies of scale are realized, and as the Hawaii Public Utilities Commission makes progress in proceedings that we are confident will facilitate new opportunities and services for energy storage systems. A state incentive program, as proposed by HB 1593 HD 1, can play a significant role in creating a bridge to the future, enabling near-term deployments and driving demand and real world experience with this important technology.

We understand there may be concerns about repurposing funding that was allocated to the GEMs program to provide rebates. It should be noted that participation in the GEMs program has been very limited to date. According to an article in Pacific Business News in November of 2016, at the time of writing, the program had not issued any loans for commercial energy projects and had issued only 17 residential loans, leaving approximately 97% of the program's overall \$150 million budget unused.<sup>1</sup> In light of this, Tesla believes that repurposing a portion of the funds as proposed by this bill to help reduce the costs of energy storage systems would help leverage the investment of private capital and have a meaningful market impact. Additionally, a rebate program within the "clean energy saving jump start program" proposed in the bill will give new life to the GEMs program. To that end, we recommend that \$50 million be allocated to support the proposed energy storage rebate program, which is approximately one-third of the existing GEMs program budget.

Several structural elements should be incorporated into the proposed framework of an energy storage rebate program to help ensure that the State gets the most "bang for its buck," regardless of the level of program funding. First, Tesla encourages establishing an incentive level that declines over time, based on market uptake. This approach helps push market participants to continue reducing costs with the goal of deploying systems without the incentive. It also recognizes that as the industry scales and matures, costs should decline and new revenue streams will emerge that should reduce the need for incentive support. To that end, Tesla suggests a three-step program where the total incentive dollars are allocated evenly across each incentive step. Each incentive step would be associated with a given incentive level. Once the budget in the first step is fully subscribed, the incentive level would decline to a pre-determined lower incentive level, which would be maintained until the funding in the second step has been fully subscribed. All remaining funds in the program would then be associated with a third, and lower incentive level.

Tesla also suggests that the incentive budget be allocated between residential, commercial and utility-scale segments. This will ensure that no individual segment crowds out any other segment while also providing a measure of certainty to project developers about the amount of incentives available to support projects. The incentive budgets and associated incentives levels should move separately between customer segments, recognizing that different segments will

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<sup>1</sup> "Clean-energy loan program GEMs has issued no commercial loans"; Duane Shimogawa; Pacific Business News; November 14, 2016.



mature at their own rates. Tesla recommends that 40% of the funding be set aside for residential projects, 40% for commercial projects and 20% for utility-scale projects. This allocation will ensure that a significant share of the funds are available to support residential projects specifically while also providing developers serving the commercial and utility-scale segments some additional certainty regarding funding availability. We also believe this dovetails nicely with the approach included in the current bill through which the incentive for residential customers is means tested, with lower income customers eligible for a comparatively higher incentive than higher income customers. By allocating a fixed proportion of the overall budget to residential customers and providing higher incentives to low and moderate income (LMI) households, this proposed framework will help ensure the program results in a more equitable allocation of program funding.

Tesla further encourages the Committee to establish a lower incentive level for storage projects that benefit from the federal Investment Tax Credit (ITC). By way of background, when storage is deployed in tandem with solar, it may be eligible to be treated as part of the solar energy property used to determine the level of federal tax credit the owner of the combined system is eligible to receive. While the Federal ITC establishes some operational constraints on battery systems<sup>2</sup>, it is appropriate for eligibility for the Federal ITC to reduce the level of state incentives needed to support project economics.

We believe this proposed structure will dramatically improve the overall efficacy of an energy storage rebate program by maximizing the total amount of storage capacity deployed under the program.<sup>3</sup>

Thank you again for the opportunity to submit this testimony.

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<sup>2</sup> Pursuant to the existing tax code, energy storage can be treated as part of the solar energy property, and thus eligible for the 30% tax credit, or some portion thereof, provided that it is charged from the solar energy system. The extent to which the storage device can take advantage of the federal ITC is maximized when the system is charged exclusively by the solar energy system, with the share of the 30% ITC amount for which the storage component of the project is eligible stepping down proportionally with the share of energy that comes from the solar system down to 75%. Below this 75% level, the ITC amount for which the storage element of the project is eligible drops to zero.

<sup>3</sup> We will provide redlines in Ramseyer Format at the hearing.



**SENATE COMMITTEE ON TRANSPORTATION AND ENERGY  
SENATE COMMITTEE ON COMMERCE, CONSUMER PROTECTION, AND  
HEALTH**

March 22, 2017, 1:15 P.M.  
*(Testimony is 2 pages long)*

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

Aloha Chair Inouye, Chair Baker, and Members of the Committees:

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 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.

Some have opposed this measure arguing, in effect, that the Green Energy Market Securitization ("GEMS") program was originally established as a loan program and any other use of the money would contradict the original purpose. This logic is flawed. First, GEMS 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. GEMS is funded through the Public Benefit Fund which, for years, has provided rebates for CFLs, LEDs, and solar water heaters. Thus, ratepayer funds will ultimately be used to provide rebates one way or another. Whether the ultimate goal is achieved through a loan or rebate program seems relatively immaterial.

Secondly, and perhaps more importantly, very little of the GEMS funding is currently deployed. Ratepayers are currently on the hook for millions of dollars of interest payments on money that isn't being used for its intended purpose. Even if the money is lent over the next 2-3 years, current ratepayers will not see a return until years later when the loans are paid back. So putting the money back to its intended purposes ensures current ratepayers see some of the benefit now, instead of later.

Finally, this measure is intended to be a bridge. It helps ensure a vibrant solar and storage market is available for a time when a more successful GEMS program is able to successfully deploy loans. It is not intended to be a permanent program, nor is it intended to replace the GEMS program.

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



industry's 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.

**From:** mailinglist@capitol.hawaii.gov  
**Sent:** Tuesday, March 21, 2017 4:51 PM  
**To:** TRE Testimony  
**Cc:** wao-hsl@WeAreOne.cc  
**Subject:** Submitted testimony for HB1593 on Mar 22, 2017 13:15PM

**HB1593**

Submitted on: 3/21/2017

Testimony for TRE/CPH on Mar 22, 2017 13:15PM in Conference Room 225

| <b>Submitted By</b> | <b>Organization</b>                            | <b>Testifier Position</b> | <b>Present at Hearing</b> |
|---------------------|--|---------------------------|---------------------------|
| Joseph Kohn MD      | We Are One, Inc. -<br>www.WeAreOne.cc -<br>WAO | Support                   | No                        |

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## **Testimony of John Grandinetti**

**President of**

**e-mail: [grandsolar808@gmail.com](mailto:grandsolar808@gmail.com)**

**In SUPPORT of INTENT of HB 1593  
RELATING TO GREEN INFRASTRUCTURE  
Before the  
SENATE COMMITTEE ON TRANSPORTATION AND ENERGY  
and the  
COMMITTEE ON COMMERCE, CONSUMER PROTECTION AND HEALTH**

**Wednesday, March 22, 2017 1:15 p.m.**

**State Capitol**

**415 South Beretania Street**

Aloha Chair Inouye, Chair Baker, Vice-Chair Dela Cruz, Vice Chair Nishihara and members of the Committees

My name is John Grandinetti. I am the President of Grand Solar Inc. and a Member of Renewable Energy Action Coalition of Hawaii (REACH). Grand Solar is a Solar installation company working towards 100% Renewable Energy capacity in Hawaii. REACH is a trade association whose vision is a Hawaiian energy economy based 100% on renewable sources indigenous to Hawaii.

I **support** the **intent** of the Energy Storage System Rebate Program contained in **HB 1593** to incentivize Hawaii power customers' investments in energy storage and new renewable generation, and to bring back hundreds of renewable energy jobs lost during the last 2 years.

I invite the Committees to consider **amending HB 1593** to provide that:

- the Energy Storage System Rebate Program be a rebate program administered by the public benefits fee administrator pursuant to HRS section 269-122, and
- the Energy Storage System Rebate Program be funded through the public benefits fee pursuant to HRS section 269-121.

**Amending HB 1593** to provide an energy storage rebate paid out of the Public Benefits Fee (PBF), instead of the Green Energy Market Securitization (GEMS) fund, would be consistent with the purpose of the PBF, and would not alter the legislature's intended purpose of the GEMS fund.

Thank you for allowing me to testify in **support** of the **intent** of **HB 1593** and to offer comments for **amending HB 1593**.

*John Grandinetti* – dig signature

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**Testimony of Laurence Ponce**  
**RME of Solar Services Hawaii**  
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**In SUPPORT of INTENT of HB 1593**  
**RELATING TO GREEN INFRASTRUCTURE**  
**Before the**  
**SENATE COMMITTEE ON TRANSPORTATION AND ENERGY**  
**and the**  
**COMMITTEE ON COMMERCE, CONSUMER PROTECTION AND HEALTH**

**Wednesday, March 22, 2017 1:15 p.m.**  
**State Capitol**  
**415 South Beretania Street**

Aloha Chair Inouye, Chair Baker, Vice-Chair Dela Cruz, Vice Chair Nishihara and members of the Committees.

My name is Laurence Ponce. I am RME of Solar Services Hawaii, and a Member of Renewable Energy Action Coalition of Hawaii (REACH). Grand Solar is a Solar installation company working towards 100% Renewable Energy capacity in Hawaii. REACH is a trade association whose vision is a Hawaiian energy economy based 100% on renewable sources indigenous to Hawaii.

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Thank you for allowing me to testify in **support** of the **intent** of **HB 1593** and to offer comments for **amending HB 1593**.

*Laurence Ponce* – dig signature

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**Testimony of Alan Lennard**  
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**In SUPPORT of INTENT of HB 1593**  
**RELATING TO GREEN INFRASTRUCTURE**  
**Before the**  
**SENATE COMMITTEE ON TRANSPORTATION AND ENERGY**  
**and the**  
**COMMITTEE ON COMMERCE, CONSUMER PROTECTION AND HEALTH**

**Wednesday, March 22, 2017 1:15 p.m.**  
**State Capitol**  
**415 South Beretania Street**

Aloha Chair Inouye, Chair Baker, Vice-Chair Dela Cruz, Vice Chair Nishihara and members of the Committees

My name is Alan Lennard. I am the Managing director of Green Power Projects LLC and a Director of Renewable Energy Action Coalition of Hawaii (REACH). Green Power Projects LLC is a Solar project facilitation company working towards 100% Renewable Energy capacity in Hawaii. REACH is a trade association whose vision is a Hawaiian energy economy based 100% on renewable sources indigenous to Hawaii.

I **support the intent** of the Energy Storage System Rebate Program contained in **HB 1593** to incentivize Hawaii power customers' investments in energy storage and new renewable generation, and to bring back hundreds of renewable energy jobs lost during the last 2 years.

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Thank you for allowing me to testify in **support** of the **intent** of **HB 1593** and to offer comments for **amending HB 1593**.

*Alan Lennard -diy signature*

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Haleiwa, HI 96712-0818



Email: [communications@ulupono.com](mailto:communications@ulupono.com)

SENATE COMMITTEES ON TRANSPORTATION & ENERGY AND COMMERCE, CONSUMER  
PROTECTION, & HEALTH

Wednesday, March 22, 2017 — 1:15 p.m. — Room 225

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

Dear Chair Inouye, Vice Chair Dela Cruz, Chair Baker, Vice Chair Nishihara, and Members of the Committees:

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

*Investing in a Sustainable Hawai'i*



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 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



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 Osserman, 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 Sen, Hawaiian Electric Companies  
Joelle Simonpietri, UH Applied Research Lab  
Ben Sullivan, Kauai County  
Terry Surlis, 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  
Senate Committee on Transportation and Energy

and

Senate Committee on Commerce, Consumer Protection, and Health

March 22, 2017 at 1:15 pm in Conference Room 225

**IN OPPOSITION TO HB1593 HD1, Relating to Energy Storage**

Chair Inouye, Chair Baker, and Members of the Committees,

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 HD1 in its current form** and offers the following comments and recommendations 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.





**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  
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Kelly King, Sustainable Biodiesel Alliance  
Kal Kobayashi, Maui County Energy Office  
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Gladys Marrone, Building Industry Assn of Hawaii  
Stephen Meder, UH Facilities and Planning  
Joshua Michaels, Ofc of US Rep. Colleen Hanabusa  
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Jeffrey Ono, Division of Consumer Advocacy, DCCA  
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Will Rolston, Hawaii County, Research & Development  
Peter Rosegg, Hawaiian Electric Companies  
Riley Saito, SunPower Systems  
Scott Sen, 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

**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 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 Energy Efficiency Portfolio Standard (EEPS) goals.

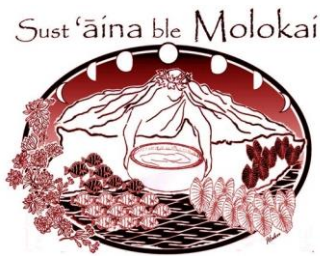
**4. Premature to Remove PUC Oversight of GEMS Programs/Operations:** The bill further proposes to remove PUC oversight from GEMS programs and operations to speed up the administrative processes. Given the challenges of the GEMS program on making loans to date, continuing to have independent PUC oversight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

**THE FORUM RECOMMENDS:**

- a. **Delete any language** in HB 1593 HD1 that would utilize GEMS funds to make “rebates” of any kind, rather than “loans” as the original GEMS legislation intended; and
- b. **Delete any language** in HB 1593 HD1 that would remove PUC oversight from the GEMS program.

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*



**SENATE COMMITTEE ON TRANSPORTATION & ENERGY  
SENATE COMMITTEE ON COMMERCE, CONSUMER PROTECTION, AND HEALTH**

March 22, 2017, 1:15 PM

Room 225

(Testimony is 2 pages long)

**SUST-ĀINA-BLE MOLOKAI'S TESTIMONY IN OPPOSITION TO HB 1593**

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

My name is Emillia Noordhoek and I am executive Director of Sust-āina-ble Molokai, a Hawaii based grass roots organization 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 economic development. We believe that energy resiliency is essential to our future prosperity and will help shape a future where economic progress and mission-focused impact can work hand in hand.

**Sust-āina-ble Molokai 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 Sust-āina-ble Molokai 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.

Sust-āina-ble Molokai 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. 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 (which impacted the Molokai community's ability to use GEMS financing as an option for low income households). Currently, the GEMS 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.

**Sust-āina-ble Molokai, PO Box 250, Kaunakakai, HI, 96748 ,Phone: 808-560-5410,  
[info@sustainablemolokai.org](mailto:info@sustainablemolokai.org) <http://www.sustainablemolokai.org>**

**Sust-‘āina-ble Molokai is in support of establishing a clean energy savings jump start program that shall be administered by the Hawaii green infrastructure authority.** The authority in collaboration with others, shall expend moneys on programs that rapidly advance the state goals of clean energy and energy efficiency with a focus on serving low- middle income residents/households.

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.

**Sust-‘āina-ble Molokai 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.

**Sust-‘āina-ble Molokai is supportive of the re-organizing PUC oversight of the green infrastructure authority to enable more rapid deployment of loans.**

Thank you for this opportunity to testify  
Emillia Noordhoek  
Sust-‘āina-ble Molokai

**From:** mailinglist@capitol.hawaii.gov  
**Sent:** Monday, March 20, 2017 10:04 AM  
**To:** TRE Testimony  
**Cc:** bruce@sunkinghawaii.biz  
**Subject:** Submitted testimony for HB1593 on Mar 22, 2017 13:15PM

**HB1593**

Submitted on: 3/20/2017

Testimony for TRE/CPH on Mar 22, 2017 13:15PM in Conference Room 225

| <b>Submitted By</b> | <b>Organization</b> | <b>Testifier Position</b> | <b>Present at Hearing</b> |
|---------------------|---------------------|---------------------------|---------------------------|
| Bruce Booker        | Sun King Inc        | Comments Only             | No                        |

Comments: Testimony In SUPPORT OF THE INTENT of HB 1593 RELATING TO GREEN INFRASTRUCTURE Before the SENATE COMMITTEE ON TRANSPORTATION AND ENERGY and the COMMITTEE ON COMMERCE, CONSUMER PROTECTION AND HEALTH Wednesday, March 22, 2017 1:15 p.m. Aloha Chair Inouye, Chair Baker, Vice-Chair Dela Cruz, Vice Chair Nishihara and members of the Committees. I support the intent of the Energy Storage System Rebate Program contained in HB 1593 to incentivize Hawaii power customers' investments in energy storage and new renewable generation, and to bring back hundreds of renewable energy jobs lost during the last 2 years. I invite the Committees to consider amending HB 1593 to provide that: • the Energy Storage System Rebate Program be a rebate program administered by the public benefits fee administrator pursuant to HRS section 269-122, and • the Energy Storage System Rebate Program be funded through the public benefits fee pursuant to HRS section 269-121. Amending HB 1593 to provide an energy storage rebate paid out of the Public Benefits Fee (PBF), instead of the Green Energy Market Securitization (GEMS) fund, would be consistent with the purpose of the PBF, and would not alter the legislature's intended purpose of the GEMS fund. Thank you for allowing me to testify in support of the intent of HB 1593 and to offer comments for amending HB 1593.

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March 21, 2017

Senator Lorraine R. Inouye, Chair  
Senator Donovan M. Dela Cruz, Vice Chair  
Committee on Transportation and Energy

Senator Rosalyn H. Baker, Chair  
Senator Clarence K. Nishihara, Vice Chair  
Committee on Commerce, Consumer Protection, and Health

Re: Testimony on HB 1593, HD1 (Relating to Green Infrastructure)  
Wed., March 22, 2017 @ 1:15 p.m.; Conference Room 225, 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

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

[AmberKinetics.com](http://AmberKinetics.com)



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 Excelsior, 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', is written over a light grey horizontal line.

Bill Barnes  
Managing Director, Development

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

[AmberKinetics.com](http://AmberKinetics.com)





**From:** mailinglist@capitol.hawaii.gov  
**Sent:** Wednesday, March 15, 2017 2:49 PM  
**To:** TRE Testimony  
**Cc:** marilynmick@pobox.com  
**Subject:** \*Submitted testimony for HB1593 on Mar 22, 2017 13:15PM\*

**HB1593**

Submitted on: 3/15/2017

Testimony for TRE/CPH on Mar 22, 2017 13:15PM in Conference Room 225

| <b>Submitted By</b> | <b>Organization</b> | <b>Testifier Position</b> | <b>Present at Hearing</b> |
|---------------------|---------------------|---------------------------|---------------------------|
| Marilyn Mick        | Individual          | Support                   | No                        |

Comments:

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**From:** mailinglist@capitol.hawaii.gov  
**Sent:** Thursday, March 16, 2017 8:58 AM  
**To:** TRE Testimony  
**Cc:** mdeycaza@yahoo.com  
**Subject:** \*Submitted testimony for HB1593 on Mar 22, 2017 13:15PM\*

**HB1593**

Submitted on: 3/16/2017

Testimony for TRE/CPH on Mar 22, 2017 13:15PM in Conference Room 225

| <b>Submitted By</b> | <b>Organization</b> | <b>Testifier Position</b> | <b>Present at Hearing</b> |
|---------------------|---------------------|---------------------------|---------------------------|
| mike deYcaza        | Individual          | Support                   | No                        |

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**From:** mailinglist@capitol.hawaii.gov  
**Sent:** Wednesday, March 15, 2017 11:26 PM  
**To:** TRE Testimony  
**Cc:** yappygrl1@aol.com  
**Subject:** \*Submitted testimony for HB1593 on Mar 22, 2017 13:15PM\*

**HB1593**

Submitted on: 3/15/2017

Testimony for TRE/CPH on Mar 22, 2017 13:15PM in Conference Room 225

| <b>Submitted By</b> | <b>Organization</b> | <b>Testifier Position</b> | <b>Present at Hearing</b> |
|---------------------|---------------------|---------------------------|---------------------------|
| Sandra Fujita       | Individual          | Support                   | No                        |

Comments:

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**From:** mailinglist@capitol.hawaii.gov  
**Sent:** Monday, March 20, 2017 2:36 PM  
**To:** TRE Testimony  
**Cc:** darrel@alternateenergyhawaii.com  
**Subject:** \*Submitted testimony for HB1593 on Mar 22, 2017 13:15PM\*

**HB1593**

Submitted on: 3/20/2017

Testimony for TRE/CPH on Mar 22, 2017 13:15PM in Conference Room 225

| <b>Submitted By</b> | <b>Organization</b> | <b>Testifier Position</b> | <b>Present at Hearing</b> |
|---------------------|---------------------|---------------------------|---------------------------|
| Darrel Yamate       | Individual          | Support                   | No                        |

Comments:

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**From:** mailinglist@capitol.hawaii.gov  
**Sent:** Monday, March 20, 2017 12:46 PM  
**To:** TRE Testimony  
**Cc:** rossk@alternateenergyhawaii.com  
**Subject:** Submitted testimony for HB1593 on Mar 22, 2017 13:15PM

**HB1593**

Submitted on: 3/20/2017

Testimony for TRE/CPH on Mar 22, 2017 13:15PM in Conference Room 225

| <b>Submitted By</b> | <b>Organization</b> | <b>Testifier Position</b> | <b>Present at Hearing</b> |
|---------------------|---------------------|---------------------------|---------------------------|
| Ross Kutsunai       | Individual          | Support                   | No                        |

Comments: Aloha Chair Inouye, Chair Baker, Vice-Chair Dela Cruz, Vice Chair Nishihara and members of the Committees. I support the intent of the Energy Storage System Rebate Program contained in HB 1593 to incentivize Hawaii power customers' investments in energy storage and new renewable generation, and to bring back hundreds of renewable energy jobs lost during the last 2 years. I invite the Committees to consider amending HB 1593 to provide that: • the Energy Storage System Rebate Program be a rebate program administered by the public benefits fee administrator pursuant to HRS section 269-122, and • the Energy Storage System Rebate Program be funded through the public benefits fee pursuant to HRS section 269-121. Amending HB 1593 to provide an energy storage rebate paid out of the Public Benefits Fee (PBF), instead of the Green Energy Market Securitization (GEMS) fund, would be consistent with the purpose of the PBF, and would not alter the legislature's intended purpose of the GEMS fund. Thank you for allowing me to testify in support of the intent of HB 1593 and to offer comments for amending HB 1593.

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**Testimony**

**In SUPPORT OF THE INTENT of HB 1593  
RELATING TO GREEN INFRASTRUCTURE**

**Before the  
SENATE COMMITTEE ON TRANSPORTATION AND ENERGY  
and the  
COMMITTEE ON COMMERCE, CONSUMER PROTECTION AND HEALTH**

**Wednesday, March 22, 2017 1:15 p.m.**

Aloha Chair Inouye, Chair Baker, Vice-Chair Dela Cruz, Vice Chair Nishihara and members of the Committees.

I **support** the **intent** of the Energy Storage System Rebate Program contained in **HB 1593** to incentivize Hawaii power customers' investments in energy storage and new renewable generation, and to bring back hundreds of renewable energy jobs lost during the last 2 years.

I invite the Committees to consider **amending HB 1593** to provide that:

- the Energy Storage System Rebate Program be a rebate program administered by the public benefits fee administrator pursuant to HRS section 269-122, and
- the Energy Storage System Rebate Program be funded through the public benefits fee pursuant to HRS section 269-121.

**Amending HB 1593** to provide an energy storage rebate paid out of the Public Benefits Fee (PBF), instead of the Green Energy Market Securitization (GEMS) fund, would be consistent with the purpose of the PBF, and would not alter the legislature's intended purpose of the GEMS fund.

Thank you for allowing me to testify in **support** of the **intent** of **HB 1593** and to offer comments for **amending HB 1593**.

**Testimony**

**In SUPPORT OF THE INTENT of HB 1593  
RELATING TO GREEN INFRASTRUCTURE**

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Thank you for allowing me to testify in **support** of the **intent** of **HB 1593** and to offer comments for **amending HB 1593**.

**Testimony**

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RELATING TO GREEN INFRASTRUCTURE**

**Before the  
SENATE COMMITTEE ON TRANSPORTATION AND ENERGY  
and the  
COMMITTEE ON COMMERCE, CONSUMER PROTECTION AND HEALTH**

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I **support** the **intent** of the Energy Storage System Rebate Program contained in **HB 1593** to incentivize Hawaii power customers' investments in energy storage and new renewable generation, and to bring back hundreds of renewable energy jobs lost during the last 2 years.

I invite the Committees to consider **amending HB 1593** to provide that:

- the Energy Storage System Rebate Program be a rebate program administered by the public benefits fee administrator pursuant to HRS section 269-122, and
- the Energy Storage System Rebate Program be funded through the public benefits fee pursuant to HRS section 269-121.

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Thank you for allowing me to testify in **support** of the **intent** of **HB 1593** and to offer comments for **amending HB 1593**.

**Sincerely,  
Reggie Salvador  
803 Ahua Street  
Honolulu, HI 96819  
Mobile: 808-383-8889**



**From:** mailinglist@capitol.hawaii.gov  
**Sent:** Monday, March 20, 2017 7:16 AM  
**To:** TRE Testimony  
**Cc:** Charles@risingsunsolar.com  
**Subject:** Submitted testimony for HB1593 on Mar 22, 2017 13:15PM

**HB1593**

Submitted on: 3/20/2017

Testimony for TRE/CPH on Mar 22, 2017 13:15PM in Conference Room 225

| <b>Submitted By</b> | <b>Organization</b> | <b>Testifier Position</b> | <b>Present at Hearing</b> |
|---------------------|---------------------|---------------------------|---------------------------|
| Charles WL Moore    | Individual          | Support                   | No                        |

Comments: Aloha Chair Inouye, Chair Baker, Vice-Chair Dela Cruz, Vice Chair Nishihara and members of the Committees. I support the intent of the Energy Storage System Rebate Program contained in HB 1593 to incentivize Hawaii power customers' investments in energy storage and new renewable generation, and to bring back hundreds of renewable energy jobs lost during the last 2 years. I invite the Committees to consider amending HB 1593 to provide that: • the Energy Storage System Rebate Program be a rebate program administered by the public benefits fee administrator pursuant to HRS section 269-122, and • the Energy Storage System Rebate Program be funded through the public benefits fee pursuant to HRS section 269-121. Amending HB 1593 to provide an energy storage rebate paid out of the Public Benefits Fee (PBF), instead of the Green Energy Market Securitization (GEMS) fund, would be consistent with the purpose of the PBF, and would not alter the legislature's intended purpose of the GEMS fund. Thank you for allowing me to testify in support of the intent of HB 1593 and to offer comments for amending HB 1593.

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**Testimony**

**In SUPPORT OF THE INTENT of HB 1593  
RELATING TO GREEN INFRASTRUCTURE**

**Before the  
SENATE COMMITTEE ON TRANSPORTATION AND ENERGY  
and the  
COMMITTEE ON COMMERCE, CONSUMER PROTECTION AND HEALTH**

**Wednesday, March 22, 2017 1:15 p.m.**

Aloha Chair Inouye, Chair Baker, Vice-Chair Dela Cruz, Vice Chair Nishihara and members of the Committees.

I **support** the **intent** of the Energy Storage System Rebate Program contained in **HB 1593** to incentivize Hawaii power customers' investments in energy storage and new renewable generation, and to bring back hundreds of jobs lost during the last 2 years. It is vital that we don't let another year pass without an energy storage incentive.

I have worked for one of Hawaii's largest locally-owned solar contractors for the past seven years. Over the last two years I have watched the industry's unnecessary decline, based on the failure of state-level policies to keep up with the changing technology environment. This bill would help remedy that situation.

I invite the Committees to consider **amending HB 1593** to provide that:

- the Energy Storage System Rebate Program be a rebate program administered by the public benefits fee administrator pursuant to HRS section 269-122, and
- the Energy Storage System Rebate Program be funded through the public benefits fee pursuant to HRS section 269-121.

**Amending HB 1593** to provide an energy storage rebate paid out of the Public Benefits Fee (PBF), instead of the Green Energy Market Securitization (GEMS) fund, would be consistent with the purpose of the PBF, and would not alter the legislature's intended purpose of the GEMS fund.

Thank you for allowing me to testify in **support** of the **intent** of **HB 1593** and to offer comments for **amending HB 1593**.

Sincerely,

Gerald Riverstone

PO Box 881113, Pukalani, HI 96788, or [jerry@haleakalasolar.com](mailto:jerry@haleakalasolar.com)

**From:** mailinglist@capitol.hawaii.gov  
**Sent:** Sunday, March 19, 2017 7:34 PM  
**To:** TRE Testimony  
**Cc:** moonierjames@gmail.com  
**Subject:** Submitted testimony for HB1593 on Mar 22, 2017 13:15PM

**HB1593**

Submitted on: 3/19/2017

Testimony for TRE/CPH on Mar 22, 2017 13:15PM in Conference Room 225

| <b>Submitted By</b> | <b>Organization</b> | <b>Testifier Position</b> | <b>Present at Hearing</b> |
|---------------------|---------------------|---------------------------|---------------------------|
| James Moonier       | Individual          | Support                   | No                        |

Comments: Please pass Bill 1593 to support consumers who cannot afford the clean energy products to participate in the benefits of this new technology.

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**From:** mailinglist@capitol.hawaii.gov  
**Sent:** Sunday, March 19, 2017 7:32 PM  
**To:** TRE Testimony  
**Cc:** kittyc8571@gmail.com  
**Subject:** Submitted testimony for HB1593 on Mar 22, 2017 13:15PM

**HB1593**

Submitted on: 3/19/2017

Testimony for TRE/CPH on Mar 22, 2017 13:15PM in Conference Room 225

| <b>Submitted By</b> | <b>Organization</b> | <b>Testifier Position</b> | <b>Present at Hearing</b> |
|---------------------|---------------------|---------------------------|---------------------------|
| Catherine Courtney  | Individual          | Support                   | No                        |

Comments: Dear Chairs Inouye, Baker and 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

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**From:** mailinglist@capitol.hawaii.gov  
**Sent:** Sunday, March 19, 2017 7:30 PM  
**To:** TRE Testimony  
**Cc:** waiyulee@gmail.com  
**Subject:** Submitted testimony for HB1593 on Mar 22, 2017 13:15PM

**HB1593**

Submitted on: 3/19/2017

Testimony for TRE/CPH on Mar 22, 2017 13:15PM in Conference Room 225

| <b>Submitted By</b> | <b>Organization</b> | <b>Testifier Position</b> | <b>Present at Hearing</b> |
|---------------------|---------------------|---------------------------|---------------------------|
| Wai Lee             | Individual          | Support                   | No                        |

Comments: Dear Chair Inouye, Chair Baker and Members of TRE and CPH, 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:** Sunday, March 19, 2017 7:28 PM  
**To:** TRE Testimony  
**Cc:** jlarson@lejardinacademy.org  
**Subject:** Submitted testimony for HB1593 on Mar 22, 2017 13:15PM

**HB1593**

Submitted on: 3/19/2017

Testimony for TRE/CPH on Mar 22, 2017 13:15PM in Conference Room 225

| <b>Submitted By</b> | <b>Organization</b> | <b>Testifier Position</b> | <b>Present at Hearing</b> |
|---------------------|---------------------|---------------------------|---------------------------|
| 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

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

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**Sent:** Sunday, March 19, 2017 7:27 PM  
**To:** TRE Testimony  
**Cc:** sksb@earthlink.net  
**Subject:** Submitted testimony for HB1593 on Mar 22, 2017 13:15PM

**HB1593**

Submitted on: 3/19/2017

Testimony for TRE/CPH on Mar 22, 2017 13:15PM in Conference Room 225

| <b>Submitted By</b> | <b>Organization</b> | <b>Testifier Position</b> | <b>Present at Hearing</b> |
|---------------------|---------------------|---------------------------|---------------------------|
| Karen Simmons       | Individual          | Support                   | No                        |

Comments: Aloha members of the Committees on Transportation and Energy, and Commerce, Consumer Protection and Health, 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:** Sunday, March 19, 2017 7:25 PM  
**To:** TRE Testimony  
**Cc:** donascot67@gmail.com  
**Subject:** Submitted testimony for HB1593 on Mar 22, 2017 13:15PM

**HB1593**

Submitted on: 3/19/2017

Testimony for TRE/CPH on Mar 22, 2017 13:15PM in Conference Room 225

| <b>Submitted By</b> | <b>Organization</b> | <b>Testifier Position</b> | <b>Present at Hearing</b> |
|---------------------|---------------------|---------------------------|---------------------------|
| Scott Sullivan      | Individual          | Support                   | No                        |

Comments: 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.  
Mahalo, Scott Sullivan

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**From:** mailinglist@capitol.hawaii.gov  
**Sent:** Sunday, March 19, 2017 7:23 PM  
**To:** TRE Testimony  
**Cc:** alohasteph@mac.com  
**Subject:** Submitted testimony for HB1593 on Mar 22, 2017 13:15PM

**HB1593**

Submitted on: 3/19/2017

Testimony for TRE/CPH on Mar 22, 2017 13:15PM in Conference Room 225

| <b>Submitted By</b> | <b>Organization</b> | <b>Testifier Position</b> | <b>Present at Hearing</b> |
|---------------------|---------------------|---------------------------|---------------------------|
| stephanie frazier   | Individual          | Support                   | No                        |

Comments: Aloha Chairs and Members of the TRE and CPH committees, 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:** Sunday, March 19, 2017 7:22 PM  
**To:** TRE Testimony  
**Cc:** laniquinns@yahoo.com  
**Subject:** Submitted testimony for HB1593 on Mar 22, 2017 13:15PM

**HB1593**

Submitted on: 3/19/2017

Testimony for TRE/CPH on Mar 22, 2017 13:15PM in Conference Room 225

| <b>Submitted By</b> | <b>Organization</b> | <b>Testifier Position</b> | <b>Present at Hearing</b> |
|---------------------|---------------------|---------------------------|---------------------------|
| Julie Quinn         | Individual          | Support                   | No                        |

Comments: Chair Inouye, Chair Baker and Members of TRE and CPH, I ask that you pass rebates for the upgrades that help HECO customers reduce their energy needs at peak times will allow Heco to decrease fossil fuel power generation. Thank you, Julie Quinn

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**From:** mailinglist@capitol.hawaii.gov  
**Sent:** Sunday, March 19, 2017 7:20 PM  
**To:** TRE Testimony  
**Cc:** rangood4@hotmail.com  
**Subject:** Submitted testimony for HB1593 on Mar 22, 2017 13:15PM

**HB1593**

Submitted on: 3/19/2017

Testimony for TRE/CPH on Mar 22, 2017 13:15PM in Conference Room 225

| <b>Submitted By</b> | <b>Organization</b> | <b>Testifier Position</b> | <b>Present at Hearing</b> |
|---------------------|---------------------|---------------------------|---------------------------|
| Randy Erickson      | Individual          | Support                   | No                        |

Comments: 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. The ball is rolling now so we should all strongly support the HB1593 initiative to keep it moving forward! Thank you, Randy Erickson Kaneohe

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**From:** mailinglist@capitol.hawaii.gov  
**Sent:** Sunday, March 19, 2017 7:18 PM  
**To:** TRE Testimony  
**Cc:** bbreis@me.com  
**Subject:** Submitted testimony for HB1593 on Mar 22, 2017 13:15PM

**HB1593**

Submitted on: 3/19/2017

Testimony for TRE/CPH on Mar 22, 2017 13:15PM in Conference Room 225

| <b>Submitted By</b> | <b>Organization</b> | <b>Testifier Position</b> | <b>Present at Hearing</b> |
|---------------------|---------------------|---------------------------|---------------------------|
| Brijit Reis         | Individual          | Support                   | No                        |

Comments: Please pass 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:** Sunday, March 19, 2017 7:16 PM  
**To:** TRE Testimony  
**Cc:** ronirooks@gmail.com  
**Subject:** Submitted testimony for HB1593 on Mar 22, 2017 13:15PM

**HB1593**

Submitted on: 3/19/2017

Testimony for TRE/CPH on Mar 22, 2017 13:15PM in Conference Room 225

| <b>Submitted By</b> | <b>Organization</b> | <b>Testifier Position</b> | <b>Present at Hearing</b> |
|---------------------|---------------------|---------------------------|---------------------------|
| Veronica J Rooks    | Individual          | Support                   | No                        |

Comments: Dear Chair Inouye, Chair Baker and Members of the Committees, I urge you to 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 air. Thank you, Dr. Veronica Rooks

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**From:** mailinglist@capitol.hawaii.gov  
**Sent:** Sunday, March 19, 2017 7:09 PM  
**To:** TRE Testimony  
**Cc:** Sonja@wailuaweb.com  
**Subject:** Submitted testimony for HB1593 on Mar 22, 2017 13:15PM

**HB1593**

Submitted on: 3/19/2017

Testimony for TRE/CPH on Mar 22, 2017 13:15PM in Conference Room 225

| <b>Submitted By</b> | <b>Organization</b> | <b>Testifier Position</b> | <b>Present at Hearing</b> |
|---------------------|---------------------|---------------------------|---------------------------|
| Sonja Kass          | Individual          | Support                   | No                        |

Comments: Dear Chair Inouye, Chair Baker and Members of the Committees, I strongly support HB1593. In order to reduce our CO2 emissions we need to switch to renewable energy and reduce our energy consumption through energy upgrades. Consumers can really help drive this change away from our dependance on fossil fuels. As KIUC and HECO can not use energy generated during the solar peak, battery storage will be most useful to the environment and the grid. 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. Thank you, Sonja Kass Kauai

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**From:** mailinglist@capitol.hawaii.gov  
**Sent:** Sunday, March 19, 2017 4:49 PM  
**To:** TRE Testimony  
**Cc:** dtewabeach@gmail.com  
**Subject:** Submitted testimony for HB1593 on Mar 22, 2017 13:15PM

**HB1593**

Submitted on: 3/19/2017

Testimony for TRE/CPH on Mar 22, 2017 13:15PM in Conference Room 225

| <b>Submitted By</b> | <b>Organization</b> | <b>Testifier Position</b> | <b>Present at Hearing</b> |
|---------------------|---------------------|---------------------------|---------------------------|
| David Thompson      | Individual          | Support                   | No                        |

Comments: Please pass this Bill for our Aina.

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**From:** mailinglist@capitol.hawaii.gov  
**Sent:** Sunday, March 19, 2017 1:02 PM  
**To:** TRE Testimony  
**Cc:** mendezj@hawaii.edu  
**Subject:** \*Submitted testimony for HB1593 on Mar 22, 2017 13:15PM\*

**HB1593**

Submitted on: 3/19/2017

Testimony for TRE/CPH on Mar 22, 2017 13:15PM in Conference Room 225

| <b>Submitted By</b>   | <b>Organization</b> | <b>Testifier Position</b> | <b>Present at Hearing</b> |
|-----------------------|---------------------|---------------------------|---------------------------|
| Javier Mendez-Alvarez | Individual          | Support                   | No                        |

Comments:

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**Testimony**

**In SUPPORT OF THE INTENT of HB 1593  
RELATING TO GREEN INFRASTRUCTURE**

**Before the  
SENATE COMMITTEE ON TRANSPORTATION AND ENERGY  
and the  
COMMITTEE ON COMMERCE, CONSUMER PROTECTION AND HEALTH**

**Wednesday, March 22, 2017 1:15 p.m.**

Aloha Chair Inouye, Chair Baker, Vice-Chair Dela Cruz, Vice Chair Nishihara and members of the Committees.

I **support** the **intent** of the Energy Storage System Rebate Program contained in **HB 1593** to incentivize Hawaii power customers' investments in energy storage and new renewable generation, and to bring back hundreds of renewable energy jobs lost during the last 2 years.

I invite the Committees to consider **amending HB 1593** to provide that:

- the Energy Storage System Rebate Program be a rebate program administered by the public benefits fee administrator pursuant to HRS section 269-122, and
- the Energy Storage System Rebate Program be funded through the public benefits fee pursuant to HRS section 269-121.

**Amending HB 1593** to provide an energy storage rebate paid out of the Public Benefits Fee (PBF), instead of the Green Energy Market Securitization (GEMS) fund, would be consistent with the purpose of the PBF, and would not alter the legislature's intended purpose of the GEMS fund.

Thank you for allowing me to testify in **support** of the **intent** of **HB 1593** and to offer comments for **amending HB 1593**.

**Testimony**

**In SUPPORT OF THE INTENT of HB 1593  
RELATING TO GREEN INFRASTRUCTURE**

**Before the  
SENATE COMMITTEE ON TRANSPORTATION AND ENERGY  
and the  
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Thank you for allowing me to testify in **support** of the **intent** of **HB 1593** and to offer comments for **amending HB 1593**.

**From:** mailinglist@capitol.hawaii.gov  
**Sent:** Sunday, March 19, 2017 4:49 AM  
**To:** TRE Testimony  
**Cc:** georgecattermole1@gmail.com  
**Subject:** Submitted testimony for HB1593 on Mar 22, 2017 13:15PM

**HB1593**

Submitted on: 3/19/2017

Testimony for TRE/CPH on Mar 22, 2017 13:15PM in Conference Room 225

| <b>Submitted By</b> | <b>Organization</b> | <b>Testifier Position</b> | <b>Present at Hearing</b> |
|---------------------|---------------------|---------------------------|---------------------------|
| George Cattermole   | Individual          | Support                   | No                        |

Comments: I am writing in support of the Energy Storage System Rebate Program contained in HB 1593. It is important to encourage customers to participate in generating and storing renewable energy. A rebate program is a good way to do this and paying for it out of the Public Benefit Fee, rather than using the GEMS fund as it is clearly consistent with the purpose of the former and not clearly consistent with the purpose of the latter. It's time for the legislature to get serious about kick starting serious efforts to move towards our 100% goal.

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**From:** mailinglist@capitol.hawaii.gov  
**Sent:** Tuesday, March 21, 2017 1:05 PM  
**To:** TRE Testimony  
**Cc:** rw@worldspot.com  
**Subject:** Submitted testimony for HB1593 on Mar 22, 2017 13:15PM

**HB1593**

Submitted on: 3/21/2017

Testimony for TRE/CPH on Mar 22, 2017 13:15PM in Conference Room 225

| <b>Submitted By</b> | <b>Organization</b> | <b>Testifier Position</b> | <b>Present at Hearing</b> |
|---------------------|---------------------|---------------------------|---------------------------|
| Rob Weltman         | Individual          | Support                   | No                        |

Comments: Lack of storage for intermittent energy production is one of the two main impediments at this time to making progress towards the state's goal of 100% renewable energy (with the other impediment being the antiquated island grids). If there was more support for storage, there would be more individuals and companies investing in it and then more individuals and companies would be able to supply electricity from solar, wind, and other intermittent sources to the grid.

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**From:** mailinglist@capitol.hawaii.gov  
**Sent:** Tuesday, March 21, 2017 8:50 PM  
**To:** TRE Testimony  
**Cc:** begoniabarry@gmail.com  
**Subject:** \*Submitted testimony for HB1593 on Mar 22, 2017 13:15PM\*

**HB1593**

Submitted on: 3/21/2017

Testimony for TRE/CPH on Mar 22, 2017 13:15PM in Conference Room 225

| <b>Submitted By</b> | <b>Organization</b> | <b>Testifier Position</b> | <b>Present at Hearing</b> |
|---------------------|---------------------|---------------------------|---------------------------|
| Barbara Barry       | Individual          | Support                   | No                        |

Comments:

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**From:** mailinglist@capitol.hawaii.gov  
**Sent:** Tuesday, March 21, 2017 6:29 PM  
**To:** TRE Testimony  
**Cc:** kshimata@hawaiiantel.net  
**Subject:** Submitted testimony for HB1593 on Mar 22, 2017 13:15PM

**HB1593**

Submitted on: 3/21/2017

Testimony for TRE/CPH on Mar 22, 2017 13:15PM in Conference Room 225

| <b>Submitted By</b> | <b>Organization</b> | <b>Testifier Position</b> | <b>Present at Hearing</b> |
|---------------------|---------------------|---------------------------|---------------------------|
| Kathy Shimata       | Individual          | Support                   | No                        |

Comments: Renewable energy is our future. The sooner, the better.

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**From:** mailinglist@capitol.hawaii.gov  
**Sent:** Wednesday, March 22, 2017 8:13 AM  
**To:** TRE Testimony  
**Cc:** rfurst808@gmail.com  
**Subject:** Submitted testimony for HB1593 on Mar 22, 2017 13:15PM

**HB1593**

Submitted on: 3/22/2017

Testimony for TRE/CPH on Mar 22, 2017 13:15PM in Conference Room 225

| <b>Submitted By</b> | <b>Organization</b> | <b>Testifier Position</b> | <b>Present at Hearing</b> |
|---------------------|---------------------|---------------------------|---------------------------|
| Richard Furst       | Individual          | Support                   | No                        |

Comments: Solar and storage are Hawaii's best options for a sustainable energy future. Please support HB1593 and other similar measures that move Hawaii in that direction. Mahalo!

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**From:** mailinglist@capitol.hawaii.gov  
**Sent:** Monday, March 20, 2017 10:42 AM  
**To:** TRE Testimony  
**Cc:** hanh@alternateenergyhawaii.com  
**Subject:** Submitted testimony for HB1593 on Mar 22, 2017 13:15PM

**HB1593**

Submitted on: 3/20/2017

Testimony for TRE/CPH on Mar 22, 2017 13:15PM in Conference Room 225

| <b>Submitted By</b> | <b>Organization</b> | <b>Testifier Position</b> | <b>Present at Hearing</b> |
|---------------------|---------------------|---------------------------|---------------------------|
| Hanh Nguyen         | Individual          | Comments Only             | No                        |

Comments: I support the intent of the Energy Storage System Rebate Program contained in HB 1593 to incentivize Hawaii power customers' investments in energy storage and new renewable generation, and to bring back hundreds of renewable energy jobs lost during the last 2 years. • the Energy Storage System Rebate Program be a rebate program administered by the public benefits fee administrator pursuant to HRS section 269-122, and • the Energy Storage System Rebate Program be funded through the public benefits fee pursuant to HRS section 269-121. Amending HB 1593 to provide an energy storage rebate paid out of the Public Benefits Fee (PBF), instead of the Green Energy Market Securitization (GEMS) fund, would be consistent with the purpose of the PBF, and would not alter the legislature's intended purpose of the GEMS fund.

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**Testimony**

**In SUPPORT OF THE INTENT of HB 1593  
RELATING TO GREEN INFRASTRUCTURE**

**Before the  
SENATE COMMITTEE ON TRANSPORTATION AND ENERGY  
and the  
COMMITTEE ON COMMERCE, CONSUMER PROTECTION AND HEALTH**

**Wednesday, March 22, 2017 1:15 p.m.**

Aloha Chair Inouye, Chair Baker, Vice-Chair Dela Cruz, Vice Chair Nishihara and members of the Committees.

I **support** the **intent** of the Energy Storage System Rebate Program contained in **HB 1593** to incentivize Hawaii power customers' investments in energy storage and new renewable generation, and to bring back hundreds of renewable energy jobs lost during the last 2 years.

I invite the Committees to consider **amending HB 1593** to provide that:

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Thank you for allowing me to testify in **support** of the **intent** of **HB 1593** and to offer comments for **amending HB 1593**.

Radford Nakamura  
radfordn@gmail.com

**From:** mailinglist@capitol.hawaii.gov  
**Sent:** Monday, March 20, 2017 2:47 PM  
**To:** TRE Testimony  
**Cc:** jeff@visit-hawaii.com  
**Subject:** Submitted testimony for HB1593 on Mar 22, 2017 13:15PM

**HB1593**

Submitted on: 3/20/2017

Testimony for TRE/CPH on Mar 22, 2017 13:15PM in Conference Room 225

| Submitted By | Organization | Testifier Position | Present at Hearing |
|--------------|--------------|--------------------|--------------------|
| Jeff         | Individual   | Comments Only      | No                 |

Comments: Aloha Chair Inouye, Chair Baker, Vice-Chair Dela Cruz, Vice Chair Nishihara and members of the Committees. I support the intent of the Energy Storage System Rebate Program contained in HB 1593 to incentivize Hawaii power customers' investments in energy storage and new renewable generation, and to bring back hundreds of renewable energy jobs lost during the last 2 years. I invite the Committees to consider amending HB 1593 to provide that: • the Energy Storage System Rebate Program be a rebate program administered by the public benefits fee administrator pursuant to HRS section 269-122, and • the Energy Storage System Rebate Program be funded through the public benefits fee pursuant to HRS section 269-121. Amending HB 1593 to provide an energy storage rebate paid out of the Public Benefits Fee (PBF), instead of the Green Energy Market Securitization (GEMS) fund, would be consistent with the purpose of the PBF, and would not alter the legislature's intended purpose of the GEMS fund. Thank you for allowing me to testify in support of the intent of HB 1593 and to offer comments for amending HB 1593.

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