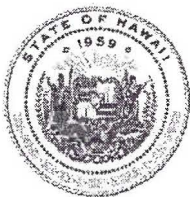


SB 2739

**RELATING TO
GRID-CONNECTED ENERGY
STORAGE SYSTEMS**



DAVID Y. IGE
GOVERNOR

SHAN S. TSUTSUI
LT. GOVERNOR

STATE OF HAWAII
OFFICE OF THE DIRECTOR
DEPARTMENT OF COMMERCE AND CONSUMER AFFAIRS
335 MERCHANT STREET, ROOM 310
P.O. Box 541
HONOLULU, HAWAII 96809
Phone Number: 586-2850
Fax Number: 586-2856
www.hawaii.gov/dcca

CATHERINE P. AWAKUNI COLÓN
DIRECTOR

JO ANN M. UCHIDA TAKEUCHI
DEPUTY DIRECTOR

TO THE SENATE COMMITTEE ON TRANSPORTATION AND ENERGY

THE TWENTY-EIGHTH LEGISLATURE
REGULAR SESSION OF 2016

WEDNESDAY, FEBRUARY 17, 2016
2:45 P.M.

TESTIMONY OF JEFFREY T. ONO, EXECUTIVE DIRECTOR, DIVISION OF
CONSUMER ADVOCACY, DEPARTMENT OF COMMERCE AND CONSUMER
AFFAIRS, TO THE HONORABLE LORRAINE R. INOUE, CHAIR,
AND MEMBERS OF THE COMMITTEE

SENATE BILL NO. SB 2739 - RELATING TO GRID-CONNECTED ENERGY
STORAGE SYSTEMS

DESCRIPTION:

This measure proposes to require electric utilities and electricity cooperatives to comply with certain priority preferences in planning energy storage system changes and to submit deployment plans to the Public Utilities Commission ("Commission") for approval.

POSITION:

The Division of Consumer Advocacy ("Consumer Advocate") offers comments on this bill.

COMMENTS:

This bill requires all electric utilities in this state to place a priority preference to energy efficiency, renewable energy, and long duration energy storage. Given Hawaii's Energy Efficiency Portfolio Standards ("EEPS") and Renewable Energy Portfolio Standards ("RPS"), the electric utilities already give a priority to energy efficiency and renewable energy in system planning. The Consumer Advocate is concerned with this bill's requirement to give long duration energy storage first priority over other potential options that the utilities might use in addressing system reliability and security issues as

greater amounts of intermittent renewable energy are added to the systems. Generally, demand response, energy efficiency measures, and fast ramping generating units are more cost-effective than energy storage to meet grid modernization needs that meet current reliability standards.

At present, Hawaiian Electric Companies' system planning is being carefully reviewed by the Commission in three separate dockets, i.e., the Power Supply Improvement Plans, the Distributed Energy Resource investigation, and the Integrated Demand Response Portfolio Plan. The Commission should be given the flexibility and discretion to consider all potential resources, including long duration energy storage, based on costs, system reliability and security, and consistency with the state's energy policy and goals without prioritizing any one or more resources that may adversely affect customers' bills in the short and long term.

Thank you for this opportunity to testify.

TESTIMONY OF RANDY IWASE
CHAIR, PUBLIC UTILITIES COMMISSION
STATE OF HAWAII
TO THE
SENATE COMMITTEE ON
TRANSPORTATION AND ENERGY

February 17, 2016
2:45 PM

MEASURE: S.B. No. 2739

TITLE: RELATING TO GRID-CONNECTED ENERGY STORAGE SYSTEMS

Chair Inouye and Members of the Committee:

DESCRIPTION:

This measure creates a new part in Chapter 269, Hawaii Revised Statutes to reform existing electric utility planning, procurement, and approval processes to require electric utilities to give priority preference to a newly defined technology called "long duration energy storage", energy efficiency, and renewables.

POSITION:

The Public Utilities Commission ("Commission") offers the following comments for the Committee's consideration.

COMMENTS:

The existing electric utility planning, procurement, and approval processes available to the Commission allow for the flexibility to equally consider all available strategies to address current and evolving issues. This measure would reduce that flexibility.

In Decision and Order No. 33320, Docket No. 2014-0183, the Commission recognized that the HECO Companies' power supply improvement plans failed to adequately address the utilization and integration of Distributed Energy Resources ("DER"). Consistent with the intent of this measure, the Commission highlighted the need for the HECO Companies to consider a diverse array of strategies for DER development that would allow increased installations of customer-sited resources that contribute to the needs of the grid. These

new strategies include customer load management, energy storage, and other control systems to utilize customer-sited resources to meet on-site load and utility system security requirements, and to reduce the amount of power exported to the grid during peak solar periods. These strategies are being considered across a variety of dockets so that they can be implemented in a cost-effective, efficient, and practical manner that is in the public interest. This measure would reduce the Commission's flexibility to consider and implement these strategies.

Thank you for the opportunity to provide comments on this measure.

**Testimony before the
Senate Committee on Transportation and Energy**

S.B. 2739 – Relating to Grid-Connected Energy Storage Systems

**Wednesday, February 17, 2016
2:45 PM, Conference Room 225**

**By Darren Ishimura
Manager, Grid Technologies
Hawaiian Electric Company**

Chair Inouye, Vice-Chair Gabbard, and Members of the Committee:

My name is Darren Ishimura, Manager of Grid Technologies at Hawaiian Electric. I am testifying on behalf of Hawaiian Electric, Maui Electric, and Hawai'i Electric Light (collectively the "Hawaiian Electric Companies").

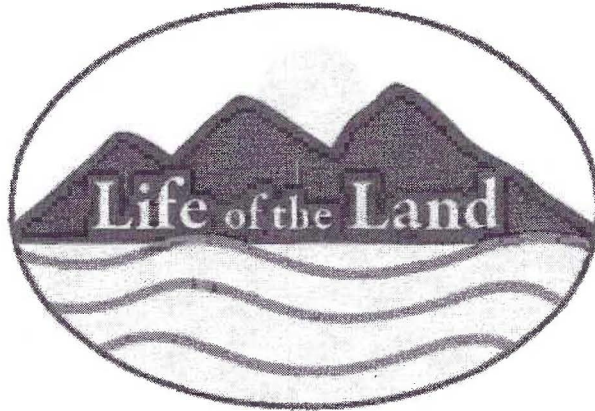
The Hawaiian Electric Companies support the intent of S.B. 2739 to consider energy storage in our resource portfolio. We continue to pursue utility energy storage options and agree that energy storage should be considered as a resource on Hawaii's electric grids. However, long-duration energy storage, along with any other resource, should be evaluated as part of an optimized portfolio of resources to aid in the attainment of Hawaii's Renewable Portfolio Standards targets while maintaining reliable service at a reasonable cost to our customers.

As drafted, S.B. 2739 focuses on a single resource type (in this case, long-duration energy storage) in terms of its pre-determination of the resource's deployment, operations, and assessment of commercial burden of proof, as well as its requirements for procurement, contracting, and reporting. We are concerned that prioritizing long-duration grid storage without considering its cost implications or technical attributes versus alternatives may compromise the reliability of the electric system and ultimately lead to higher costs for customers.

We agree that long-duration energy storage is important. However, it should be evaluated alongside all other potential resources, including but not limited to, distributed energy resources, demand response, time of use rates, flexible generation, and energy storage that provide a range of other ancillary services to the grid, and transmission and distribution assets. This is needed to determine the optimal portfolio of resources that will balance any particular resource's technical contribution against its life cycle costs, including proper recycling and disposal at the end of the useful life, and ultimately, provide the lowest costs to our customers. The Hawaiian Electric Companies conduct rigorous analyses to develop these optimal resource portfolios in its Power Supply Improvement Plans (PSIP) which are overseen by the Hawai'i Public Utilities Commission with broad stakeholder involvement.¹

Thank you for the opportunity to testify on this measure.

¹ Decision and Order No. 32052 at 72-73, Docket No. 2014-0183: "The PSIPs are to include actionable strategies and implementation plans to expeditiously retire older, less-efficient fossil generation, reduce must-run generation, increase generation flexibility, and adopt new technologies such as demand response and energy storage for ancillary services, and institute operational practice changes, as appropriate, to enable integration of a diverse portfolio of additional low cost renewable energy resources, reduction of energy costs and improvements in generation operational efficiencies."



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

COMMITTEE ON TRANSPORTATION AND ENERGY
Senator Lorraine R. Inouye, Chair
Senator Mike Gabbard, Vice Chair

DATE: Wednesday, February 17, 2016
TIME: 2:45 p.m.
PLACE: Conference Room 225

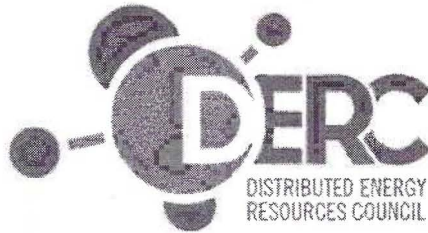
Re: SB 2739 Relating To Grid-Connected Energy Storage Systems **Support**

Aloha Chair Inouye, Vice Chair Gabbard, and Member of the Committees

Life of the Land is Hawai`i's own energy, environmental and community action group advocating for the people and `aina for 46 years. Our mission is to preserve and protect the life of the land through sound energy and land use policies and to promote open government through research, education, advocacy and, when necessary, litigation.

Hawai`i has been installing batteries that are designed to even out supply in the sub-second and in the few minute ranges. What Hawai`i needs is to reduce the evening peak demand, shift demand to the mid-day, and/or find ways to shift day-time solar to the evening. This bill is an important step in that direction.

Mahalo, Henry Curtis, Executive Director



Before the Senate Committee on Transportation and Energy
Wednesday, February 17, 2016, 2:45 p.m., Room 225
SB 2739: RELATING TO GRID-CONNECTED ENERGY STORAGE

Aloha Chair Inouye, Vice Chair Gabbard, and members of the Committee,

On behalf of the Distributed Energy Resources Council of Hawaii ("DER Council"), I would like to testify in opposition to SB 2739, which requires electric utilities and cooperatives to comply with certain priority preferences for long duration energy storage and to submit deployment plans to the PUC for approval. The DER Council is a nonprofit trade organization formed to assist with the development of distributed energy resources and smart grid technologies to support an affordable, reliable, and sustainable energy supply for Hawaii.

The DER Council strongly supports an energy future for Hawaii that includes energy storage in its various forms to best support our emerging modern energy system which no longer depends upon imported fossil fuels. However, the DER Council believes that SB 2739 takes the wrong approach to energy planning and procurement as outlined below, and asks that this committee defer this bill.

SB 2739 wrongly assumes that long duration storage is the best option for storage energy planning

SB 2737 mandates that the utility or electricity cooperative that plans to change its generation, transmission, or distribution system shall give first preference to energy efficiency, renewables, and long duration energy storage, each of equal preference value. This mandate makes the faulty assumption that the best and only way to include storage in the mix of future energy planning is to put long duration energy storage in the position of first priority preference. Although long duration energy storage will most likely be part of the mix with storage assets as we move forward with grid modernization, long duration energy storage is only one of many different types and applications of energy storage which provide a wide variety of benefits to the electrical grid. For example, some types of energy storage are designed to provide a burst of power to the grid for a very short duration to shore up frequency in the case of an emergency or to supplement regulating reserves. Other types of energy storage provide support for ongoing frequency regulation which occurs constantly throughout the day. The need for these and other types of storage depends upon several factors, and the utility or energy cooperative should not be mandated to put long duration storage first when it might not be what the utility needs to maintain a safe and reliable grid.

In addition, SB 2739 appears to assume that long duration energy storage has greater value as the utility is mandated to give long duration energy storage first priority over other types of energy storage such as distributed energy storage. The development of grid-connected distributed storage (behind the meter) has already begun to provide specific ancillary services to the grid in Hawaii for the benefits of all ratepayers, and these systems are customer invested and maintained. The DER Council therefore believes that

distributed energy storage has the potential to provide equal or better service and value to the grid, and distributed energy storage should remain a viable option for the utility to make the best use of.

SB 2739 interferes with the current power supply improvement plans (PSIP) dockets

SB 2739 also interferes with the PSIP, which is an open docket currently before the PUC which directs the utility to submit updated Power Supply Improvement Plans for the HEI companies. The final plans are due April 1, 2016, and we anticipate that the plans will provide extensive and complex planning which will include and benefit from the many types of energy storage currently available. To mandate a priority preference for a specific type of energy storage would conflict with the ongoing planning process, and presents an overly simplistic approach to a multi-faceted framework.

Although the DER Council supports the general intent of mandating that the utility first consider efficiency and renewables whenever they plan to make changes to the electrical grid, the DER Council believes that the planning and upgrading process must give the utility's planners flexibility and access to all renewable tools in order to meet our new energy goals.

Thank you for the opportunity to testify

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

Senate Bill 2739, Related to Grid-Connected Energy Storage Systems
Testimony of Hermina Morita

Aloha Chair Inouye and Members of the Committee

This measure puts forward a list of “findings” and mandates a certain priority preference in the planning of an energy storage system deployment strategy. This bill has the potential to be a detriment to Hawaii’s electric utilities and their customers, who must ultimately bearing the costs, given the many uncertainties due to the electric sector’s evolving business model and advancing technologies. What the electric utilities and Hawaii Public Utilities Commission (PUC) require at this time is flexibility to address and adapt to these uncertainties rather than legislative mandates. Legislative mandates may prove to be a hinderance or burdensome if they cannot be amended in a timely way due to rapidly changing technological conditions. Moreover, the legislative process and timetable does not lend itself to the detailed technical and economic analysis that is necessary to ensure cost-effectiveness, affordability, safety and reliability.

Furthermore, before the PUC are several significant and on-going investigations with regard to the Hawaiian Electric Companies’ planning efforts in which energy storage is to be considered. The PUC has already made clear its position on the role of energy storage through its Inclinations. Kauai Island Utility Cooperative is already a national leader in the utilization of grid connected, utility scale energy storage and recently executed a “first of its kind” dispatchable energy storage agreement with SolarCity.

For the above reasons this measure should be tabled and not be considered. Thank you for the opportunity to testify.

Kaala Coleman

From: mailinglist@capitol.hawaii.gov
Sent: Monday, February 15, 2016 11:14 AM
To: TRE Testimony
Cc: dylanarm@hawaii.edu
Subject: *Submitted testimony for SB2739 on Feb 17, 2016 14:45PM*

SB2739

Submitted on: 2/15/2016

Testimony for TRE on Feb 17, 2016 14:45PM in Conference Room 225

Submitted By	Organization	Testifier Position	Present at Hearing
Dylan Armstrong	Individual	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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