

UNIVERSITY OF HAWAI'I SYSTEM

Legislative Testimony

Testimony Presented Before the Senate Committee on Higher Education and Senate Committee on Transportation and Energy March 21, 2017 at 2:10 p.m. by Kalbert K. Young Vice President for Budget and Finance/Chief Financial Officer University of Hawai'i System

HB 848 HD2 – RELATING TO ENERGY MODERNIZATION AT THE UNIVERSITY OF HAWAII SYSTEM

Chairs Kahele and Inouye, Vice Chairs Kidani and Dela Cruz and members of the committees:

The University of Hawai'i (UH) supports HB 848 HD2, Relating to Energy Modernization at the University of Hawai'i. This piece of legislation will not only reduce the University's dependence on fossil fuel generation and decrease its energy costs, which will ultimately lessen the burden of using tuition and fees to pay for utilities but it will also emphasize the need to change the current mindset of using renewables as THE energy source rather an alternative.

The purpose of this bill is to encourage and facilitate the development and use of microgrids at the various campuses and facilities operated by the University of Hawai'i in such a manner as to expand access to locally generated renewable energy and advanced distributed energy resources, and to promote the efficient distribution of electricity to the State's residents and businesses. To this end, the measure seeks PUC oversight and authority over micro-grid related rates and charges that the electric utility may charge the University.

Currently, there is no PUC oversight of microgrids that require interface and cooperation with the public utility. This measure inserts PUC oversight and authority over microgrids managed by the University, which ensures review by an independent body.

In order to achieve UH's Net Zero Energy mandate (Act 99, Session Laws of Hawai'i 2015), the University will need to develop large-scale renewable energy projects that will benefit our students and the communities we serve, can help to increase the macro electric system grid's stability and resilience, and support the State in achieving its goal of 100% clean energy by 2045.

HB848 HD2 will improve UH's ability to execute on renewable energy projects at UH-West O'ahu and UH Hilo. UH expends as much as \$45 million each year for electrical utilities alone – which is between 10-15% of all tuition paid by students. Reducing electrical costs would be significant to reducing the cost of education and significant progress towards achieving the Net Zero mandate.

This bill will encourage the facilitation, development and use of microgrids and renewable energy across the University System, as well as increase the options available to develop collaborative solutions to finance and develop large-scale renewable energy projects.

It also establishes initial parameters on the microgrid size and distance from the power source, striking a balance between the University's need to use renewable energy to help achieve net-zero energy and an allowable use of the electric utility's facilities.

Thank you for the opportunity to testify in support of the measure.



UNIVERSITY OF HAWAI'I SYSTEM

Legislative Testimony

Testimony Presented Before the Senate Committee on Higher Education and Senate Committee on Transportation and Energy March 21, 2017 at 2:10 p.m. By Donald O. Straney, Ph.D. Chancellor, University of Hawai'i at Hilo

HB 848 HD2 – RELATING TO ENERGY MODERNIZATION AT THE UNIVERSITY OF HAWAII SYSTEM

Chairs Kahele and Inouye, Vice Chairs Kidani and Dela Cruz, and members of the committees:

My name is Donald Straney, Chancellor of the University of Hawai'i at Hilo (UHH). We support the intent of HB 848 HD2 to encourage and facilitate the development and use of micro grids and renewable energy across the University of Hawai'i System.

UH Hilo views the proposal as a means to achieve its strategic plan of demonstrating leadership in sustainable resource use. The use of renewable energy sources on our campus will help UH achieve its Net Zero Energy mandate by 2035 and the State of Hawai'i's goal of 100% clean energy by 2045.

At present UH Hilo is served mostly by a single utility grid with limited installed PV capacity of 630 kw. We would like to enhance this to become more like what is today thought of as a microgrid. We have examined the scope and financial feasibility of various renewable energy projects at different sites on the UH Hilo campus. We believe this bill will facilitate expansion of distributed renewable energy sources on our campus.

This bill will also facilitate collaboration for UH Hilo to learn with our local utility company how to integrate renewable energy sources into an existing grid and to prepare the next generation of energy managers to do the same. This is an important resource for education, teaching, and learning, and would be particularly useful for our new Energy Science certificate program.

We support HB 848 HD2 provided its passage does not replace or adversely impact priorities in our BOR approved budget.

Thank you for the opportunity to testify on HD 848 HD2. Aloha.



UNIVERSITY OF HAWAI'I SYSTEM

Legislative Testimony

Testimony Presented Before the Senate Committee on Higher Education and Senate Committee on Transportation and Energy March 21, 2017 at 2:10 p.m. By Maenette Benham Chancellor, University of Hawai'i – West O'ahu

HB 848 HD2 – RELATING TO ENERGY MODERNIZATION AT THE UNIVERSITY OF HAWAII SYSTEM

Chairs Kahele and Inouye, Vice Chairs Kidani and Dela Cruz, and members of the committees:

Thank you for the opportunity to submit testimony in support of HB 848 HD2 – Relating to Energy Modernization at the University of Hawai'i.

The University of Hawai'i System has a legislative mandate (Act 99, Session Laws of Hawai'i 2015) to achieve net-zero energy by 2035. While the University supports this visionary goal, the University hopes to maximize the use of alternative energy sources to ensure this unfunded mandate does not come at the expense of our students, either directly or indirectly.

To this end, the University of Hawai'i – West Oahu (UHWO) has the opportunity to use its property, mauka of the H-1 freeway, to develop a photovoltaic farm that, via this bill, could connect to and meet the energy demands of the main UHWO campus. UHWO's enrollment continues to increase each year and, with the expansion of academic programs and related facilities, the energy demand and associated utility costs will also increase.

This bill would provide a vehicle to cost effectively develop and utilize this proposed alternate energy source. The power produced would not only service the planned 300-acre campus but could also serve the 168 acres of non-campus lands targeted for development through a private/public partnership agreement. The non-campus lands are planned for development in close coordination and collaboration with UHWO such that it will complement and enhance the college town experience and provide long-term financial benefits for the University.

Thank you for the opportunity to testify on this measure.

TESTIMONY OF RANDY IWASE CHAIR, PUBLIC UTILITIES COMMISSION STATE OF HAWAII TO THE SENATE COMMITTEES ON HIGHER EDUCATION & TRANSPORTATION AND ENERGY

March 21, 2017 2:10 p.m.

MEASURE: H.B. No. 848, H.D. 2 TITLE: Relating to Energy Modernization at the University of Hawaii System

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

DESCRIPTION:

This measure would exempt microgrids that promote and serve public higher education institutions from regulation as a public utility by the Public Utilities Commission ("Commission").

POSITION:

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

COMMENTS:

The Commission supports the development of microgrids as an option to meet the energy needs of customers as articulated in the *Commission's Inclinations on the Future of Hawaii's Electric Utilities* (See Docket No. 2012-0036, Order No. 32052). Microgrids offer the potential to aggregate pockets of load and generation resources, which can disconnect and reconnect to the main grid in times of emergency.

However, the Commission notes that oversight and consumer protection issues may arise for entities served or affected by a microgrid exempt from Commission regulation. For example, it is unclear how just and reasonable rates and important minimum standards for interconnection or reliability would be established for microgrids exempt from Commission regulation, particularly if, as drafted in this measure, a microgrid exempt from Commission regulation is allowed to serve entities "on or within properties adjacent to or nearby the institution's property[.]" Furthermore, it is unclear if undue subsidization between customers served within and outside of a microgrid could occur absent Commission review. H.B. No. 848, H.D. 2 Page 2

Should the Legislature choose to encourage and support the development of this and other microgrids, the Commission should retain the appropriate regulatory authority to address this and other issues to ensure that the implementation of microgrids serves the broad public interest.

Thank you for the opportunity to testify on this measure.



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 HIGHER EDUCATION AND TO THE SENATE COMMITTEE ON TRANSPORTATION AND ENERGY

THE TWENTY-NINTH LEGISLATURE REGULAR SESSION OF 2017

TUESDAY, MARCH 21, 2017 2:10 P.M.

TESTIMONY OF DEAN NISHINA, EXECUTIVE DIRECTOR, DIVISION OF CONSUMER ADVOCACY, DEPARTMENT OF COMMERCE AND CONSUMER AFFAIRS, TO THE HONORABLE KAIALI'I KAHELE, CHAIR, TO THE HONORAGLE LORRAINE R. INOUYE, CHAIR AND MEMBERS OF THE COMMITTEES

HOUSE BILL NO. 848, H.D. 2 - RELATING TO ENERGY MODERNIZATION AT THE UNIVERSITY OF HAWAII SYSTEM

DESCRIPTION:

This measure proposes to exempt microgrids that promote and serve public higher education institutions from regulation as a public utility by the Public Utilities Commission. Adds a definition for "microgrid."

POSITION:

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

COMMENTS:

The Consumer Advocate acknowledges the legislature's intent to facilitate the University of Hawaii's ("UH") interest in developing a microgrid that might allow UH to expand access to renewable energy and advanced distributed energy resources and to ensure that such interest does not result in unintended consequences, such as UH being regulated as a public utility. The Consumer Advocate supports efforts to enable customer choice but contends that all customers should bear their fair share of costs.

House Bill No. 848, HD2 Senate Committee on Higher Education Senate Committee on Transportation and Energy March 21, 2017 Page 2

The Consumer Advocate believes that if this measure continues to move forward as currently drafted, there may be unintended and undesirable consequences that might occur. One such undesirable consequence is the possibility that the costs incurred by the utility to accommodate the microgrid will not be recoverable from UH, which means that other customers will be required to subsidize those unrecovered costs. In certain sections of the proposed measure, there are provisions that prohibit a utility from assessing certain charges related to an interconnected microgrid. Further, the Consumer Advocate is not aware of any statutory or regulatory language that prohibits a microgrid.

If these Committees intend to move this bill forward, the Consumer Advocate offers additional comments. Consistent with the ideas of continued Commission oversight to protect UH from any discriminatory charges but also protecting other customers from having to subsidize any microgrid, the proposed language in (O)(v) should be modified to reflect that an electric utility may only assess Commission approved charges and fees. Such provision should prevent an electric utility from assessing discriminatory and/or arbitrary rates, charges, or fees while still protecting other customers so that subsidization of the microgrid does not occur.

Thank you for this opportunity to testify.

TESTIMONY BEFORE THE SENATE COMMITTEES ON HIGHER EDUCATION AND

TRANSPORTATION AND ENERGY

H.B. No. 848, H.D. 2

Relating to Energy Modernization at the University of Hawaii System

Tuesday, March 21, 2017 2:10 p.m. State Capitol, Conference Room 414

Kevin M. Katsura Assistant Deputy General Counsel (Regulatory), Legal Department Hawaiian Electric Company, Inc.

Chairs Kahele and Inouye, Vice Chairs Kidani and Dela Cruz, and Members of the Committees:

My name is Kevin Katsura and I am testifying on behalf of Hawaiian Electric Company and its subsidiary utilities Maui Electric Company and Hawai'i Electric Light Company (collectively referred to as "the Companies). The Companies support microgrids that benefit all customers (those within and outside the microgrid). However, because of the significant cost shifting issues to our other customers, the Companies oppose HB 848 HD 2.

This bill, among other things:

- allows the university to use the utilities transmission and /or distribution lines and equipment ("Wheeling") and not allow the utility to charge a charge or fee ("Free-Wheeling"), which makes all other customers pay for the cost of the infrastructure needed to support the university.
- requires the utility to generate and deliver power, instantaneously, to the university whenever it needs power at any time, day or night, instantaneously (standby power) while shifting the costs of providing

standby power to all of our other customers (by prohibiting the utility to charge the university standby rates or similar charges).

Wheeling:

This bill:

- Allows the establishment of wheeling before determining if it is feasible, how it would impact all customers in Hawaii, and whether it would fit into the state's energy policy of 100% RPS cost effectively by 2045.
- Allows independent power producers to sell electricity directly to end users likely benefitting a few large-load customers at the expense of all other customers who may have to pay for all the costs of the current infrastructure while impeding the utilities' ability to pursue 100% renewable energy by 2045.
- May result in the degradation of service reliability as the utility would not be able to negotiate to change operating requirements and project design to protect the system. The utilities need to be involved in setting operational reliability standards to assure system reliability.
- Creates winners and losers between independent power producers those who sell directly to a select group through wheeling vs. those currently with purchased power agreements with the utilities or currently negotiating Power Purchase Agreements with the utility.

In Hawai'i, there's no extension cord to the mainland. Unlike California and many other places we're compared to, we can't plug into the mainland grid, either to buy or sell electricity to neighboring utilities and for reliability. As loads continue to decrease, as we have seen over the last 10 years, the loss of large customers, such as the University of Hawaii system, will impair the sustainability of fair cost allocations to all customers which will impair economic development and the attainment of our State's renewable policies and goals. We must address the State's energy future as a whole and not with techniques that sound reasonable as stand-alone concepts, especially those used in larger grids in the mainland with large manufacturing and commercial loads. Hawaii has the best chance of success when all stakeholders can participate in reasoned discussions.

Hawaiian Electric has been actively working with the UH System Administration on options to help them achieve their energy and sustainability goals, which includes how they might effectively develop renewable energy systems on their lands. We are seeking win-win solutions that simultaneously help the University *and* our broader community of energy customers. This bill does not contemplate a collaborative, mutual gains approach between the UH, Hawaiian Electric and other customers, and in fact pursues an opposite pathway, putting the UH at odds with our other customers. We did not need any legislation to begin our collaboration with the UH, and it is unfortunate that the proposed legislation may effectively shut our collaboration down.

Thank you for this opportunity to testify.



March 21, 2017

The Twenty-Ninth Legislature, State of Hawaii Hawaii State Senate Committee on Higher Education Committee on Transportation and Energy

HB848 - RELATING TO ENERGY MODERNAZATION AT THE UNIVERSITY OF HAWAII SYSTEM

Chairs Kahele and Inouye, Vice Chairs Kidani and Dela Cruz, and Members of the Committees,

The International Brotherhood of Electrical Workers Local Union 1260, AFL-CIO (IBEW1260), represents more than 3500 members throughout the State of Hawaii, more than 1500 of whom work in Hawaii's utility industry and respectfully offers the following testimony in **OPPOSITION** to House Bill 848 (HB848).

While IBEW1260 understands, and supports the legislatures intent to modernize the University of Hawaii electrical system and supports the development of microgrids across our State, any such system should remain regulated by Hawaii's Public Utilities Commission to ensure reliability and consumer protection. Additionally, wheeling in the State of Hawaii which is independent of any interconnected grid ultimately serves to hurt Hawaii's lower income workers and consumers. For these reasons, IBEW1260 cannot support HB848.

Mahalo for the opportunity to testify on this issue.

Respectfully,

Michael M. Brittain

Michael M. Brittain Asst. Business Manager IBEW1260 / AFL-CIO



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P.O. Box 23404 Honolulu, Hawai'i 96823

www.adaaction.org

March 20 , 2017

- TO: Honorable Chairs Kahele and Inouye and Members of Higher Education and Transportation & Energy Committees
- RE: HB 848 HD2 Relating to Energy Modernization at the U.H. System Support for hearing on March 21

Americans for Democratic Action is an organization founded in the 1950s by leading supporters of the New Deal and led by Patsy Mink in the 1970s. We are devoted to the promotion of progressive public policies.

We support HB 848 HD2 as it would exempt higher education microgrids from Public Utilities Commission regulation. We support the transition to microgrids and see this as a pilot project involving experts in energy technology. In our question to move to green energy this is a good if small step.

Thank you for your consideration.

Sincerely,

John Bickel President



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

COMMITTEE ON HIGHER EDUCATION Senator Kaiali`i Kahele, Chair Senator Michelle Kidani, Vice Chair

COMMITTEE ON TRANSPORTATION AND ENERGY Senator Lorraine Inouye, Chair Senator Donovan Dela Cruz, Vice Chair

Tuesday, March 21, 2017 2:10 PM Conference Room 414

re: HB 848, HD2 ENERGY MODERNIZATION AT UNIVERSITY OF HAWAII SYSTEM. **COMMENTS** Aloha Chairs Kahele and Inouye, Vice Chairs Kidani and Dela Cruz, and Committee Members

Life of the Land is Hawai`i's own energy, environmental and community action group advocating for the people and `aina for 47 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.

Life of the Land would like to support this bill, but cannot do so. HOWEVER, we are including at the end of this testimony, proposed language that could advance the bill, if that is the legislature`s intent.

Life of the Land strongly agrees with the testimony of Hawaiian Electric Companies in previous hearings on this bill. With great reluctance, Life of the Land asserts that NELHA and UH are not ready for microgrids, and that any bill to advance such microgrids should be held.

There are possible ways to salvage the bills. We have sought to engage with the parties involved. But to date, we have not seen a way forward.

Life of the Land is a very strong supporter of distributed renewable energy and microgrids. We believe they are the future. A hierarchical microgrid architecture, consisting of a transmission backbone and a series of layered microgrids allows (1) greater security against natural disasters and cyber-attacks, (2) greater opportunity to test alternatives, and (3) different reliability levels at different cost margins to meet different needs.

The Public Utilities Commission has some very intense, high-level, on-going, regulatory proceedings dealing with Distributed Energy Resources, Demand Response, Reliability, and other key issues.

Electric grids, both here and elsewhere, are the largest and most complex manmade structures on the planet.

Life of the Land has been admitted to more than 40 regulatory proceeding before the Hawai`i Public Utilities Commission (PUC). We sat on the PUC Reliability Standards Working Group (RSWG), and participate in numerous proceedings and technical meetings dealing with distributed energy systems, interconnection standards, reliability requirements, cost allocation issues, queue prioritization issues, and stand-by charges.

Hawai`i faces unique challenges and must develop unique solutions. Hawai`i is at the forefront of a distributed intermittent (wind and solar) revolution.

Other places with high levels of distributed renewable energy have baseload renewables such as hydroelectric, or extension cords to large grids that act as batteries.

Life of the Land strongly believes and supports the development of microgrids for far flung communities on the Big Island, for sensitive sites such as military bases, for school and university campuses, and for added security in an era of cybersecurity threats.

The Hawaiian Electric Companies have asserted that they get as many as 100,000 cyber-attacks in one day. It takes only one to knock out an island grid. With layered microgrid hierarchies, damage could be limited.

Life of the Land notes that microgrids are totally legal in Hawai`i and already exist at (1) hospitals and police stations which have on-site back-up generators, (2) residential and commercial buildings in the form of solar or wind combined with a battery, and (3) electric vehicles (which are mobile microgrids). We have toured the Camp Smith inner and outer microgrid in Aiea.

Microgrids are ideal for Department of Defense (DoD) military institutions, the Natural Energy Laboratory of Hawaii Authority (NELHA), the multiple campuses of the University of Hawai`i (UH), and the various campuses of the Department of Education (DOE). These institutions have conscientious people working on sustainability.

The DoD has the expertise to understand these issues, and to understand how their systems can interface with the utility grid.

Some NELHA and UH microgrid proponents have the commitment, the desire, and the willingness to advance microgrids. Some proponents appear to lack the technical sophistication to understand how their systems would interface with the utility system.

There is an indication that there is a disconnect at UH between those who would implement microgrids, and those who have asked the legislature to step in, and enact laws exempting UH from following needed precautions and safeguards.

In conclusion, the UH Board of Regents and NELHA have proposed putting the cart in front of the horse, by proposing unworkable solutions, that could harm the grid, and add costs to other grid users.

Possible Language to Advance the Bill

SECTION 1. The legislature finds that the use of renewable energy, advanced distributed energy resources, and energy efficiency in Hawaii can provide significant financial, health, environmental, and workforce benefits to the State.

The legislature further finds that the use of microgrids, generally defined as a localized electrical system composed of interconnected loads and distributed energy resources within clearly defined electrical boundaries, can be a positive step toward achieving Hawai`i`s energy goals. Microgrids can facilitate the achievement of Hawaii's clean energy policies by enabling the integration of higher levels of renewable energy and advanced distributed energy resources, including energy storage and demand response.

The legislature further finds microgrids can be of great value to isolated and rural residential and commercial areas of our State.

The legislature also recognizes that a Master Plan can be useful in determining a roadmap for the development of microgrids.

SECTION 2. Chapter 304A, Hawaii Revised Statutes, is amended by adding a new section to be appropriately designated 16 and to read as follows:

3O4A- Microgrid project. (a) Notwithstanding any other law to the contrary, the university shall develop a microgrid master plan to establish, implement, and operate one or more microgrid

projects at or within any properties owned, leased, or controlled by the university. (b) The university may establish an interconnection working group composed of educational, utility and non-profit experts to examine microgrid interconnection issues and stand by fees. (c) The University shall submit the microgrid master plan and any proposed bills to the Legislature not less than twenty days prior to the start of the 2018 legislative session.

Mahalo,

Henry Curtis Executive Director



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 848 HD2 RELATING TO ENERGY MODERNIZATION AT THE UNIVERSITY OF HAWAII

TUESDAY MARCH 21, 2017 2:10 PM. Conference Room 414

Aloha, Senator Lorraine R. Inouye, Chair, Senator Donovan M. Dela Cruz, 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 848 HD2**

This Act gives clarity to definition and use of microgrids. This is needed to facilitate the use of microgrids in our schools and other qualified entities.

As noted in the Act: Microgrids can facilitate the achievement of Hawaii's clean energy policies by enabling the integration of higher levels of renewable energy and advanced distributed energy resources, including energy storage and demand response.

It is important to allow microgrids to operate as NON UTILITY entities, because they serve specific, easily identified, users, not the general public.

HB 848 HD2– 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



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 Seu, Hawaiian Electric Companies Joelle Simonpietri, UH Applied Research Lab Ben Sullivan, Kauai County Terry Surles, Hawaii State Energy Office, DBEDT Lance Tanaka, Par Hawaii, Inc. Maria Tome, Public Utilities Commission Kirsten Turner, Ofc of US Representative Tulsi Gabbard Alan Yamamoto, Ofc of US Senator Mazie Hirono

Testimony of Sharon Moriwaki Chair, Hawaii Energy Policy Forum

To the Senate Committee on Higher Education and Senate Committee on Transportation and Energy

March 21, 2017 at 2:10 pm in Conference Room 414

COMMENTS ON HB848 HD2, Relating to Energy Modernization at the University of Hawaii System

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

I am Sharon Moriwaki, Chair 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.

HB 848, HD2 exempts microgrids that promote and serve public higher education institutions from regulation as a public utility by the Public Utilities Commission, and adds a definition for "microgrid". It also authorizes the establishment of microgrid demonstration projects for the generation, storage and distribution of renewable energy.

The Forum provides the following comments:

Microgrids have great potential to help integrate more renewable energy into our electric grids and providing for additional resilience and flexibility for those on a microgrid. However, there should be a set of standards or rules that would apply to <u>any</u> microgid project, rather than naming specific entities or projects in statute. Additionally, any use of a utilities assets or services should be compensated – otherwise those costs will be borne by other ratepayers.

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

From:	mailinglist@capitol.hawaii.gov
Sent:	Friday, March 17, 2017 2:58 PM
То:	HRE Testimony
Cc:	sue.leeloy@hawaiicounty.gov
Subject:	*Submitted testimony for HB848 on Mar 21, 2017 14:10PM*

<u>HB848</u>

Submitted on: 3/17/2017 Testimony for HRE/TRE on Mar 21, 2017 14:10PM in Conference Room 414

Submitted By	Organization	Testifier Position	Present at Hearing
Council Woman Sue Lee Loy	Individual	Support	No

Comments:

Please note that testimony submitted <u>less than 24 hours prior to the hearing</u>, 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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From:	mailinglist@capitol.hawaii.gov
Sent:	Friday, March 17, 2017 8:09 AM
То:	HRE Testimony
Cc:	loli@hawaii.edu
Subject:	Submitted testimony for HB848 on Mar 21, 2017 14:10PM

<u>HB848</u>

Submitted on: 3/17/2017 Testimony for HRE/TRE on Mar 21, 2017 14:10PM in Conference Room 414

Submitted By	Organization	Testifier Position	Present at Hearing
Lo-Li Chih	Individual	Support	No

Comments: There is not much dispute on the benefits of distributed generation & microgrid. However, if micro-grids are restricted to operate in silos, the reliability issue & energy storage costs will make most of them impractical. Micro grids must be integrated into the overall power grid. My understanding is that the HECO group is not allowed to provide distributed generation. It is understandable that the HECO group has concerns over the distributed generation they have no control of to be connected to the power grid they are responsible to manage. This bill is only a small step. More changes should be made to allow & require the HECO group to participate & support the development of distributed generation. Rules & regulation should make the HECO group part of the solution - not road blocks, for the sustainable future of Hawaii.

Please note that testimony submitted <u>less than 24 hours prior to the hearing</u>, 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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