

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

February 16, 2017  
2:04 p.m.

**MEASURE:** H.B. No. 848, H.D. 1

**TITLE:** RELATING TO ENERGY MODERNIZATION AT THE UNIVERSITY OF  
HAWAII SYSTEM

Chair Woodson and Members of the Committee:

**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:**

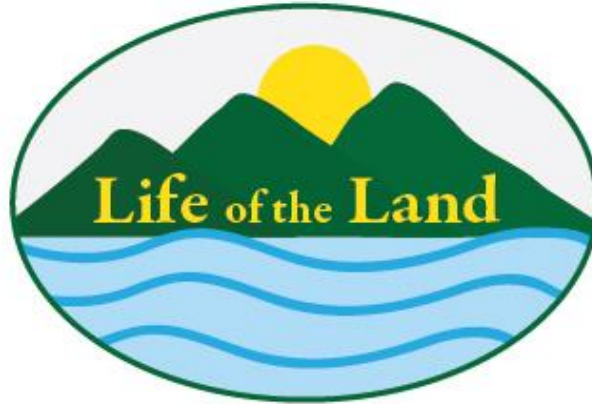
The Commission offers the following comments for the Committee’s consideration.

**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).

However, this measure allows for a microgrid exempt from Commission regulation to serve entities “on or within properties adjacent to or nearby the institution’s property[.]” 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 important minimum standards for interconnection or reliability would be established for microgrids exempt from Commission regulation.

Thank you for the opportunity to testify on this measure.



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

COMMITTEE ON HIGHER EDUCATION

Rep. Justin H. Woodson, Chair  
Rep. Mark J. Hashem, Vice Chair

Thursday, February 16, 2017  
2:04 P.M.  
Conference Room 309

RE HB 848 HD1 RELATING TO ENERGY MODERNIZATION AT UH PLEASE HOLD

Aloha Chair Woodson, Vice Chair Hashem, and Members of the Committee,

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 has been in over Public Utilities Commission regulatory proceedings dealing with policy, reliability, cost allocation, rates, grids, generation, transmission, distribution, and mergers. We are enthusiastic supporters of microgrids. But not all microgrids are equal.

**Electric Transmission & Distribution Grids are the largest man-made structures in the State. A disturbance anywhere on the system, may impact frequency and voltage, across the entire grid.**

HB 848 HD1 has a lot of moving parts, some of which have the power to create some serious unintended consequences. Others would generate cross-subsidies between different groups of people. Still others would disrupt long-standing regulatory practices by the Commission.

This table is based on public information and private conversations. There may be more to the UH proposal, but we have not found it.

<b>Microgrids</b>	<b>Camp Smith Aiea</b>	<b>Parker Ranch</b>	<b>UH Mānoa</b>
Primary Power System	HECO Grid	Parker Ranch	UH Grid
Backup Power System	Camp Smith Inner and Outer Microgrids	HELCO Grid	? ? ?
Capable Microgrid Managers	✓	✓	? ? ?
<b>Operational</b>	✓	X	X
Master Plan	✓	✓	X
Thorough Internal Analysis	✓	✓	X
Thorough Public Vetting	✓	✓	X
Cyber Secure (Red Team Analysis)	✓	? ? ?	X
<b>No Threat to Utility Grid</b>	✓	✓	X
Reasonable Cost Allocation	✓	✓	X
<b>Regulated</b>	✓	✓	X

Based on the information we have, we believe the bill must be held.

Mahalo,

Henry Curtis  
Executive Director

**From:** mailinglist@capitol.hawaii.gov  
**Sent:** Tuesday, February 14, 2017 4:32 PM  
**To:** HEDtestimony  
**Cc:** makahababy@aol.com  
**Subject:** Submitted testimony for HB848 on Feb 16, 2017 14:04PM

**HB848**

Submitted on: 2/14/2017

Testimony for HED on Feb 16, 2017 14:04PM in Conference Room 309

<b>Submitted By</b>	<b>Organization</b>	<b>Testifier Position</b>	<b>Present at Hearing</b>
Sara Perry	Individual	Comments Only	No

Comments: After a thorough conversation with UH Sustainability Coordinator, Matthew Lynch, I would like to comment on this bill. From my understanding, UH already operates with multiple microgrids. Microgrids are currently required to still be hooked up to the HECO grid, and HECO is able, at their own discretion, to charge whatever they want to maintain that connection in the event that a fully sustainable/off grid UH needed to hook up to the HECO grid in an emergency situation. Thus, UH, the PUC, and HECO all need to come to some sort of agreed upon standby service rate (p.17, line 8) so that UH can budget for this, and any other users needing this service in the future can have an expectation of a predictable amount for budgeting purposes. If HECO is allowed to set this rate willy-nilly, for UH, or any other entity, it makes budgeting extremely difficult. In the case of UH, not having a set figure puts their fiscal calculations in peril from year to year. Please see that these standby fees are regulated and given oversight. Mahalo

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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# UNIVERSITY OF HAWAII SYSTEM

## Legislative Testimony

**Late  
Testimony**

Testimony Presented Before the  
House Committee on Higher Education  
February 16, 2017 at 2:04 p.m.

By  
Kalbert Young  
Vice President for Budget and Finance/Chief Financial Officer  
University of Hawai'i System

### HB 848 HD1 – RELATING TO ENERGY MODERNIZATION AT THE UNIVERSITY OF HAWAII SYSTEM

Chair Woodson, Vice Chair Hashem and members of the committee:

The University of Hawai'i ("University") supports the original version of HB 848, Relating to Energy Modernization at the University of Hawaii, but has concerns and comments on the HD1 version.

The original purpose of this Act was 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.

HB 848 HD1 compromises and wholly changes the intent of the original version of HB 848, with specific regard to PUC oversight and authority. HD1 attempts to clarify that the electric utility can assess rates and charges to a public higher education institution without PUC oversight and authority. This has the potential to effectively eliminate any economic benefit to the University for establishing or developing any microgrids across its campuses and properties.

In order to achieve our Net Zero Energy mandate (Act 99, Session Laws of Hawaii 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 & resilience, and support the State in achieving its goal of 100% clean energy by 2045.

The original HB 848 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. The amendments of HD1, however, discourages these investments by the University.

Thank you for the opportunity to testify in support of the original version of HB 848 and express concerns and comments on the HD1 version.

**TESTIMONY BEFORE THE HOUSE COMMITTEE ON  
HIGHER EDUCATION**

**LATE**

**H.B. No. 848, H.D. 1**

**Relating to Energy Modernization at the University of Hawaii System**

Thursday, February 16, 2017

2:04 pm

State Capitol, Conference Room 309

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

Chair Woodson, Vice Chair Hashem, and Members of the Committee:

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. The Companies support microgrids that benefit all customers (those within and outside the microgrid). Accordingly, the Companies oppose HB 848 HD 1.

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 will impair the sustainability of fair cost allocations to all customers which will impair economic development and the attainment of our state 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 is 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.

This bill, among other things:

- Exempts microgrids from being regulated as public utilities in addition it prohibits the university from paying its fair share of costs by limiting the types of charges, fees, or penalties the utility can charge to the university.
- Allows the university to establish microgrids 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.
- Benefits the university at the expense of all other customers who will have to pay for all the cost 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.

To ensure ALL customers benefit from, and are not adversely impacted by microgrids, we recommend that four key principles be addressed:

1. *Fairness with increased customer options:* Some of our customers have expressed an interest in exploring microgrids as the economics of different solutions, such as renewables and storage, improve. We recommend that the bill encourage collaboration and partnering between utilities and customers to design and operate microgrids and determine and coordinate the specific services needed. These additional services should enhance the value for customers connected to the integrated energy district and ensure that ALL customers benefit from establishing microgrids, not just those within the microgrids. Also, customers within the microgrids should continue to remain customers of the utility and be able to participate in the utilities' energy programs as part of the broader integrated grid. One example of this concept is the collaboration between Hawaiian Electric and the Army to install a 50MW generating facility at Schofield. This system will normally be connected to the larger grid to provide benefits to all customers, but has the ability to be isolated to the Army system to provide them increased energy security and resiliency during abnormal circumstances, a high priority requirement for the Department of Defense.
2. *Safety when operating the integrated energy district:* Operating an electric grid is complex and the safety of all customers served is paramount. Having an integrated energy district within the macro grid adds more complexity to the coordination and operation of these systems particularly when personnel are working in the energy district and in the macro grid. It is recommended that the operation of the integrated energy district be the responsibility of the Companies to ensure the safety of all customers served.
3. *Reliability of the macro electric system:* As stated in the preamble, there may be operational benefits that could be derived from an integrated energy district if executed in close coordination and partnership with the macro electric system. To ensure that ALL customers benefit, there should be no negative impacts on the reliability of the macro electric system grid. The Companies agree and reaffirm the wording in the proposed bill that there should not be any compromise to the stability and reliability of the public utility's electric grid.
4. *Fairness regarding cost shift issues:* In addition, microgrids should not result in increased costs for customers outside of the microgrids. The operational and economic benefits of an integrated energy district should benefit ALL customers. To ensure there is no cost shift issues, regulatory policies need to be addressed as well.

In addition, we would like to include the following definition of a microgrid as defined by the USDOE microgrid group:

*A microgrid is a group of interconnected loads and distributed energy resources within clearly defined electrical boundaries that acts as a single*



*controllable entity with respect to the grid. A microgrid can connect and disconnect from the grid to enable it to operate in both grid-connected or island-mode.*

Thank you for this opportunity to testify.