

DAVID Y. IGE
GOVERNOR

DOUGLAS S. CHIN
LIEUTENANT GOVERNOR

**STATE OF HAWAII
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DEPUTY DIRECTOR

**TO THE HOUSE COMMITTEE ON
CONSUMER PROTECTION AND COMMERCE**

**TWENTY-NINTH LEGISLATURE
Regular Session of 2018**

Tuesday, February 13, 2018
2:00 p.m.

**TESTIMONY OF DEAN NISHINA, EXECUTIVE DIRECTOR, DIVISION OF
CONSUMER ADVOCACY, DEPARTMENT OF COMMERCE AND CONSUMER
AFFAIRS, TO THE HONORABLE ROY M. TAKUMI, CHAIR,
AND MEMBERS OF THE COMMITTEE**

HOUSE BILL NO. 2110, H.D. 1 - RELATING TO RESILIENCY.

DESCRIPTION:

This measure directs the Public Utilities Commission (“Commission”) to establish a microgrid services tariff or tariffs to encourage and facilitate the development and use of energy resilient microgrids. This House Draft 1 version includes language in section 3 of the bill that directs the Commission to consider and learn from the actions taken to establish and deploy microgrids in Puerto Rico.

POSITION:

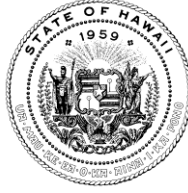
The Division of Consumer Advocacy (“Consumer Advocate”) offers comments on this bill.

COMMENTS:

The Consumer Advocate appreciates the Legislature’s recognition that Hawaii must approach its energy planning future with a holistic vision. The Consumer Advocate has consistently been advocating for electric service that is affordable, safe, reliable, and

resilient. The Consumer Advocate agrees that microgrids could have a significant role to play in achieving Hawaii's clean energy policies and that steps should be taken to ensure Hawaii can investigate the role that microgrids might play. The Consumer Advocate also appreciates the Legislature's acknowledgement that microgrids could adversely impact other customers. To protect all customers' interests, the necessary analysis should be allowed to proceed before the Commission. There is currently a docket before the Commission that focuses on Distributed Energy Resources, Docket No. 2014-0192. Some of the apparent objectives of this proposed measure should be addressed in the upcoming phase of that docket. Thus, the Consumer Advocate suggests that, rather than advancing this bill, the Legislature consider allowing the Commission to continue its efforts in Docket No. 2014-0192 and deferring this bill. If, however, the Legislature believes it is necessary to communicate its desire to have the Commission address microgrids, the Consumer Advocate suggests that using a resolution to communicate that desire, rather than a statute, might be sufficient and more administratively efficient.

Thank you for this opportunity to testify.



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Thank you for this opportunity to testify.



**Testimony before the House Committee on Consumer Protection & Commerce
February 13, 2018
2:00 pm
Conference Room 320
H.B. 2110 HD1– Relating to Resiliency**

**By Keiki-Pua Dancil, Ph.D.
Director, Business Strategy Development
Hawaiian Electric Company, Inc.**

Chair Takumi, Vice Chair Ichiyama, and Members of the Committee:

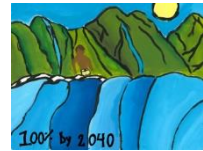
My name is Keiki-Pua Dancil, and I am the Director of Business Strategy Development at Hawaiian Electric Company. I am testifying on behalf of Hawaiian Electric and its subsidiary utilities, Maui Electric and Hawaii Electric Light (collectively “Companies”). The Companies **support** H.B. 2110 HD 1, however would like to **offer suggested edits** (see below), which we feel would not limit the proposed bill.

As we transition to a 100% renewable future, safety, reliability, and resiliency of our island grids is paramount. The Companies believe that properly designed microgrids may provide benefits to all. The Companies are encouraged with the language in the proposed bill and support working through a PUC process to help identify appropriate microgrid programs and tariff structures.

In the HD1 version, section 3 was added, particularly calling out Puerto Rico. The Companies would like to expand this to “other jurisdictions, including Puerto Rico” as there are many lessons learned beyond those from Puerto Rico, which is still in the process of rebuilding and establishing its infrastructure.

SECTION 3. In establishing a microgrid services tariff, the public utilities commission shall consider the actions taken to establish and deploy microgrids in other jurisdictions, **including** Puerto Rico, ~~following the 2017 Atlantic hurricane season and the preemptive steps the State can take to address a potential similar local disasters~~s in the future

Thank you for the opportunity to provide this testimony.



HOUSE COMMITTEE ON CONSUMER PROTECTION & COMMERCE

February 13, 2018, 2:00 P.M.

Room 329

(Testimony is 2 pages long)

TESTIMONY IN STRONG SUPPORT OF HB 2110 HD1

Aloha Chair Takumi, Vice Chair Ichiyama, and Committee members:

Blue Planet Foundation **strongly supports** HB 2110 HD1, seeking to strengthen Hawaii's energy systems by facilitating the development of energy resilient microgrids. This measure directs the Public Utilities Commission (PUC) to establish a microgrid services tariff to standardize the value of services exchanged between the microgrid owner and the utility.

The devastation of Puerto Rico by Hurricane Maria last year was a painful wake-up call. Like Puerto Rico, Hawaii's current energy system is not designed for the violence of climate change. Nearly 90% of Puerto Rico residents lacked power one month after the storm hit. Today, Puerto Rico is rebuilding its energy system and incorporating microgrids, or smaller grids with local control capability that can disconnect from the larger electricity grid and operate autonomously. This is critical for times when a severe storm or disaster knocks out the larger electricity grid. **In times of emergency, residents need safe energy "oases" with energy storage to power critical medical equipment, provide refrigeration, and charge critical communication devices.**

While Hawaii is a national leader in developing renewable energy, few microgrids have been developed, as their development has been inhibited by a number of factors, **including interconnection barriers and a lack of a standard of terms regarding the value of services exchanged between the microgrid operator and the utility.**

Microgrids—a small configuration of renewable energy, energy storage, and control that is connected to the larger electricity grid—can strengthen our energy system and reduce costs for everyone. They are also capable of operating alone, or "islanding," in the event that the larger power grid fails, providing needed safe havens in times of disaster or emergency.

But microgrids aren't just for emergencies. During regular use, microgrids can provide valuable services to help regulate the power on the larger utility grid. By smartly controlling the loads, storage, renewable energy, and electric vehicles that are connected within a microgrid, the microgrid itself can help regulate frequency, provide voltage control, shift load, provide demand response capabilities, and other ancillary services.

info@blueplanetfoundation.org

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House Bill 2110 HD1 provides guidance to the PUC to develop a tariff for such microgrid services, **ensuring that such a tariff is designed to provide fair compensation for electricity, electric grid services, and other benefits provided to or by the electric utility,** the person or entity operating the microgrid, and other ratepayers. Further, in developing the tariff, the PUC, to the extent possible, should seek to **standardize and streamline the related interconnection processes for microgrid projects.** This would encourage and facilitate the development of microgrids and leverage the technology for the benefit and security of our islands' power systems.

Without a standard process for valuing microgrid services and a clear process to interconnect, Hawaii risks that future microgrids might disconnect from the utility grid altogether. When this happens, not only do other utility customers lose the benefit of the services that the microgrid provides, they may also face increased rates as the overall energy system costs are covered by fewer customers.

Hawaii has the opportunity to meet the trifecta of needs for more renewable energy, greater resiliency, and public safety by harnessing the power of energy storage, microgrids, and smart planning.

We respectfully request that the Committee forward HB 2110 HD1 as currently written.

Thank you for the opportunity to testify.



Hawaii Solar Energy Association
Serving Hawaii Since 1977

**TESTIMONY OF THE HAWAII SOLAR ENERGY ASSOCIATION
IN REGARD TO HB 2110 HD1, RELATING TO ENERGY RESILIENCY
BEFORE THE
HOUSE COMMITTEE ON CONSUMER PROTECTION AND COMMERCE
ON
TUESDAY, FEBRUARY 13TH, 2018**

Chair Takumi, Vice-Chair Ichiyama, and members of the committee, my name is Will Giese, and I represent the Hawaii Solar Energy Association, Inc. (HSEA)

HSEA **strongly supports** HB 2110 HD1. This measure directs the Public Utilities Commission to establish a microgrid services tariff to encourage and facilitate the development and use of energy resilient microgrids.

Microgrids build resiliency and safety into hawaii's electric grid, are an essential part of the path the Hawaii's 100% renewable energy future, and are necessary to the widescale adoption of renewable energy at all levels of community. A well designed tariff for microgrid developments that provide for the many benefits and grid services these types of projects provide will improve the overall health of the electric grid while simultaneously provide much needed rate relief to energy consumers.

Expedited interconnection of microgrids is likely to be a subject of major energy policy making in the years to come. The Integrated Resources Planning docket, Power Supply Improvement Plan, and HECO's recent Grid Modernization plan all subsume, in one form or another, the concept of residential, commercial, and utility scale microgrids. Renewables across the state over the last few years have been mired by ineffective and poorly administered interconnection processes that have slowed state progress towards 100% renewable. Allowing the Public Utilities Commission to begin a process to examine the interconnection of any sized microgrid is important and necessary.

We **strongly support** HB 2110 HD1 and we urge this committee to pass this measure.

Thank you for the opportunity to testify.



SIERRA CLUB OF HAWAII
MĀLAMA I KA HONUA. *Cherish the Earth.*

HOUSE COMMITTEE ON CONSUMER PROTECTION AND COMMERCE

Tuesday, February 13, 2018 2:00PM Conference Room 329

In SUPPORT of HB 2110 HD1 Relating to resiliency

Aloha Chair Takumi, Vice Chair Ichiyama, and members of the Committee,

On behalf of our 20,000 members and supporters, the Sierra Club of Hawai'i, a member of the Common Good Coalition, **supports HB 2110 HD1**. Directs the Public Utilities Commission (PUC) to establish a microgrid services tariff to encourage and facilitate the development and use of energy resilient microgrids.

In general, the Sierra Club of Hawai'i *supports any effort to build renewable energy that helps meet our state's goal of 100% renewable by 2045*. Microgrids have the added benefit of providing access to these types of energy generation to a wider and more diverse range of communities. Microgrids such as the one proposed in HB 2110 HD1 has the potential to benefit low and middle income communities and renters, to demographics that might not otherwise be able to benefit from residential distributed energy generation.

Expedited interconnection of microgrids is likely to be a subject of major energy policy making in the years to come. The Integrated Resources Planning docket, Power Supply Improvement Plan, and Hawai'i Electric Company (HECO)'s recent Grid Modernization plan all subsome, in one form or another, the concept of residential, commercial, and utility scale microgrids. Renewables across the state over the last few years have been mired by ineffective and poorly administered interconnection processes that have slowed state progress towards 100% renewable. Allowing the PUC to begin a process to examine the interconnection of any sized microgrid is important and necessary.

Although not specifically called out within the statute as written, we propose that any energy generated by and interconnected microgrid and sold to off-site consumers be prioritized for low and middle income communities, Department of Hawaiian Homelands (DHHL) communities,

and students. We also recommend, to the extent possible, that locally owned companies, installers, and contractors be given priority during bid or development of any project.

Thank you for the opportunity to testify in **support of HD 2110 HD1**.

HB-2110-HD-1

Submitted on: 2/12/2018 1:48:50 PM

Testimony for CPC on 2/13/2018 2:00:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Melodie Aduja	OCC Legislative Priorities Committee	Support	No

Comments:



Email: communications@ulupono.com

HOUSE COMMITTEE ON CONSUMER PROTECTION & COMMERCE
Tuesday, February 13, 2018 — 2:00 p.m. — Room 329

Ulupono Initiative Strongly Supports HB 2110 HD 1, Relating to Resiliency

Dear Chair Takumi, Vice Chair Ichiyama, and Members of the Committee:

My name is Kyle Datta and I am General 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 better management of waste and fresh water. 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 strongly supports HB 2110 HD 1, which directs the Public Utilities Commission to establish a microgrid services tariff, because it aligns with our goal of increasing the production of clean, renewable energy and will make our islands more resilient in the event of a natural disaster.

Renewable energy innovation is needed to achieve the state's ambitious goal of 100 percent clean energy by 2045. Microgrid projects can provide communities and organizations with a faster path for incorporating renewable energy production and storage projects. Microgrids provide each island's system with greater resilience because these grids are able to separate from the electricity grid if it fails and then help restart the grid. While the Department of Defense's microgrids help play this role today, additional microgrids on the civilian side would augment system security for all. For critical facilities that need a continuous supply of electricity from a microgrid, such as hospitals, the water utility, police and telecommunications, along with resort complexes, microgrids can sometimes provide higher reliability and resilience than the traditional utility.

I currently serve on the Transformation Advisory Council for PREPA in Puerto Rico and microgrids are very much under consideration as Puerto Rico moves forward for exactly the reasons stated above. The Puerto Rico commission (PREC) recently passed the initial regulations authorizing microgrids.

For microgrids to be part of Hawai'i's electrical system, the economic relationships between the microgrid owner and the host utility must be efficient and equitable. The

Investing in a Sustainable Hawai'i



pricing between the two parties should adhere to the fundamental principle that each party receives value for the services it provides and pays for the services it needs. Thus, Ulupono strongly endorses the language on page 4, (1) and (2), regarding the microgrid services tariff.

We recommend, for the avoidance of doubt, that we add an additional line after line 20 on page 4:

“(3) Will not make the microgrid a public utility”

We add this clarification to avoid a situation where the microgrid would become a public utility because it sold power across tax map keys. This would add an unnecessary administrative burden.

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.

Thank you for this opportunity to testify.

Respectfully,

Kyle Datta
General Partner



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

COMMITTEE ON CONSUMER PROTECTION & COMMERCE

Rep. Roy M. Takumi, Chair
Rep. Linda Ichiyama, Vice Chair

Tuesday, February 13, 2018
2:00 P.M.
Conference Room 329

HB 2110, HD1 RELATING TO RESILIENCY SUPPORT, Proposed Amendment.

Aloha Chair Takumi, Vice Chair Ichiyama, 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.

The bill is focused on standardizing microgrids. The bill was introduced due to efforts by UH and NELHA to plan for microgrids.

Life of the Land is a very strong proponent of microgrids but believes that the formation of microgrids is misunderstood. Contrary to the beliefs of many, microgrids are legal in this state. Any house with solar and a battery that can stay lit when the grid goes down, is a microgrid. Any electric car powered by the grid is a microgrid when it is in the drive mode. Anyone can build a multi-building microgrid anywhere in the State, providing they comply with the applicable rules and regulations of the Public Utilities Commission.

The Legislature should specify that the two entities seeking microgrids (UH Manoa and NELHA) are parties in the PUC proceedings.

Mahalo, Henry Curtis, Executive Director

HB-2110-HD-1

Submitted on: 2/11/2018 12:58:22 PM

Testimony for CPC on 2/13/2018 2:00:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Stephany Cecil	Individual	Support	No

Comments:

I support this initiative.

HB-2110-HD-1

Submitted on: 2/11/2018 3:40:10 PM

Testimony for CPC on 2/13/2018 2:00:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Carlton York	Individual	Support	No

Comments:

please Move forward with This Bill !



HB2110 HD1

Energy Resiliency; Microgrid Services Tariff

February 13, 2018, 2:00p.m.

Relating to Resiliency

Aloha Chair Takumi, Vice Chair Ichiyama, and members of the committee. The Sierra Student Coalition at the University of Hawai'i is in Support of HB2110 HD1 relating to energy.

HB2110 HD1 creates a tariff to help not only encourage, but enable the establishment of a microgrid here in Hawai'i. The benefits of Having a microgrid are unprecedented, and thus funding a microgrid is imperative for Hawai'i's future. Residents and businesses are vulnerable to disruptions in the islands' energy systems caused by extreme weather events or other disasters. Microgrids would build energy resiliency into our communities, thereby increasing public safety and security. Microgrids hold great potential as a way for small groups of energy users as well. Energy users such as an apartment complex, a hotel, a school campus--to produce their own energy and be self-sufficient in the event of an emergency. These microgrids can also provide services to the PUC by creating systems of energy storage and demand response yo support load shifting, frequency response, and voltage control. Funding this microgrid will help unlock the microgrid market by creating clear, standard terms for microgrids to apply.

Thank you for the opportunity to testify.

HB-2110-HD-1

Submitted on: 2/12/2018 9:45:02 AM

Testimony for CPC on 2/13/2018 2:00:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Angela Huntmer	Individual	Support	No

Comments:

There are so many locations on our islands where microgrids would not only be a good idea but also they would be really necessary for safety and efficiency. Mahalo.

HB-2110-HD-1

Submitted on: 2/12/2018 9:20:53 AM

Testimony for CPC on 2/13/2018 2:00:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Mary Whispering Wind	Individual	Support	No

Comments:

I SUPPORT HB2110,

Please protect our environment. Organic natural agriculture, without toxic contamination of our food and environment is necessary to protect the health, safety, and economic future of Hawaii's citizens.

Mahalo for your concerned consideration,

Mary Whispering Wind
PWT Maui, volunteer

HB-2110-HD-1

Submitted on: 2/12/2018 10:17:18 AM

Testimony for CPC on 2/13/2018 2:00:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Tulsi Greenlee	Individual	Support	No

Comments:

HB-2110-HD-1

Submitted on: 2/12/2018 11:03:30 AM

Testimony for CPC on 2/13/2018 2:00:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Leslie Cole-Brooks	Individual	Support	No

Comments:

HB-2110-HD-1

Submitted on: 2/12/2018 11:23:38 PM

Testimony for CPC on 2/13/2018 2:00:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Don Aweau	Individual	Support	No

Comments: