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

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

**Monday, March 19, 2018
3:15 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. 2110, H.D. 2 - 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, and 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. This House Draft 2 version amends the effective date of the measure.

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.



**Testimony before the Senate Committee on Transportation & Energy
and the Senate Committee on Commerce, Consumer Protection, and Health**

March 19, 2018

3:15 pm

Conference Room 225

H.B. 2110 HD2 Relating to Resiliency

By Keiki-Pua Dancil, Ph.D.

Director, Business Strategy Development

Hawaiian Electric Company, Inc.

Chairs Inouye & Baker, Vice Chairs Espero & Tokuda, and Members of the Committees:

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 HD2, however would like to **offer suggested edits** (see below), which we feel would improve the effectiveness of 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 HD2, Section 3, the bill identifies Puerto Rico as the only example. 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.



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
David Bissell, Kauai Island Utility Cooperative
Michael Brittain, IBEW, Local Union 1260
Jade Butay, Hawaii Dept of Transportation
Caroline Carl, Hawaii Energy
Albert Chee, Island Energy Services
Elizabeth Cole, The Kohala Center
Kyle Datta, Ulupono Initiative
Richard DeGarmo, Hawaii Gas
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, Ofc of Hawaii State Governor
Will Giese, Inter-Island Solar Supply
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
Darren Kimura, Energy Industries
Representative Chris Lee, Hawaii State Legislature
Gladys Marrone, Building Industry Assn of Hawaii
Stephen Meder, UH Facilities and Planning
Sharon Moriwaki, UH Public Policy Center
Rocky Mould, Ofc of Climate Change
Aina Naniolo, Ofc of US Congresswoman Colleen Hanabusa
Ron Nelson, Defense Logistics Energy Agency
Dean Nishina, Division of Consumer Advocacy
Denise Oda, US Department of Agriculture
Stan Osserman, HCATT
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
Ross Roley, PACOM
Will Rolston, Hawaii County, Research & Development
Peter Rosegg, Hawaiian Electric Companies
Scott Seu, Hawaiian Electric Companies
Carilyn Shon, Hawaii State Energy Office, DBEDT
Joelle Simonpietri, Simonpietri LLC
Ben Sullivan, Kauai County
Lance Tanaka, Par Hawaii
Maria Tome, Public Utilities Commission
Kirsten Turner, Ofc of US Representative Tulsi Gabbard
Alan Yamamoto, Ofc of US Senator Mazie Hirono

Testimony of John Cole
Chair, Electricity Working Group
Hawaii Energy Policy Forum

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

March 19, 2018 at 3:15 pm in Conference Room 225

**IN SUPPORT OF HB 2110, HOUSE DRAFT 2, RELATING TO
RESILIENCY**

Chairs Inouye, Baker, Vice-Chairs Espero, Tokuda and Members of the
Committees,

I am John Cole, Chair of the Electricity 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.

HB 2110 HD2, Directs the Public Utilities Commission to establish a microgrid services tariff to encourage and facilitate the development and use of energy resilient microgrids.

The Forum supports this bill for the following reasons:

Not only can microgrids increase resiliency and allow for faster recovery in the event of natural disasters and other emergencies, they can also provide valuable grid services on a day-to-day basis through the coordination and control of a microgrids generation and loads. The Forum supports establishing a tariff that standardizes and streamlines projects, and provides fair compensation for services and benefits provided to or by the electric utility, microgrid operators, and 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



Testimony Before the Senate Committees on
Transportation and Energy
Commerce, Consumer Protection and Health

By Michael Yamane
Chief of Operations
Kauai Island Utility Cooperative
4463 Pahee Street, Suite 1, Lihue, Hawaii, 96766-2000

Monday, March 19, 2018, 3:15 p.m.
Conference Room # 225

House Bill No. 2110, HD2 – Relating to Resiliency

To the Honorable Lorraine R. Inouye and Rosalyn H. Baker, Chairs; the Honorable Will Espero and Jill N. Tokuda, Vice Chairs; and Members of the Committees:

DESCRIPTION:

Directs the Public Utilities Commission to establish a microgrid services tariff to encourage and facilitate the development and use of energy resilient microgrids.

COMMENTS:

KIUC supports the intent of HB 2110, HD 1, however KIUC believes that this measure is unnecessary for the following reasons:

- This measure attempts to address technical, policy and economic issues associated with the establishment of a microgrid services tariff based on a defined set of principles/requirements. KIUC contends that this measure may result in unintended consequences adverse to the public interest (particularly to KIUC's member-owners) by unduly limiting and restricting the Commission in how it can address these issues. The Commission must have adequate regulatory flexibility to address these complex and technical issues as it deems necessary for the public interest.
- The Commission, under its general investigatory powers (i.e., Hawaii Revised Statutes §§ 269-7(a) and 269-15), already has the statutory authority and discretion to initiate a proceeding to address technical, policy and economic issues associated with the establishment of a microgrid services tariff. Therefore, we argue that this bill is unnecessary.

- If the intent of this measure is to address energy resiliency or the vulnerability to disruptions to the island of Kauai's energy system caused by extreme weather events or other disasters, KIUC has already implemented various processes and physical improvements to its system. As you may be aware, in 1992, Hurricane Iniki caused substantial damage to Kauai's electrical infrastructure similar to what occurred in Puerto Rico in 2017. Since then, Kauai Electric (KIUC's predecessor) and KIUC has hardened its infrastructure and has significantly improved resiliency. In addition, KIUC has utilized advancement in energy storage technology to increase grid stability, reliability, and resiliency.

In light of the above, KIUC recommends that this bill should be deferred. However, if the Legislature is still inclined to proceed in mandating a Commission proceeding to address the technical, policy and economic issues associated with establishing a microgrid tariff applicable for all electric utilities in the State, then KIUC requests that it be specifically exempted from this measure.

HB-2110-HD-2

Submitted on: 3/17/2018 11:28:02 AM

Testimony for TRE on 3/19/2018 3:15:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
John Crouch	Testifying for Energy Research Systems	Support	No

Comments:

My name is John Crouch. I support this measure.

A micorgrid tariff is essential to bringing clarity to the investment community for funding of major renewable energy projects.

A microgrid tariff will also put into perspective the value of renewable energy production and storage to the utility community.

Thank you for addressing this issue.

Aloha, John Crouch

883-9411



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 Will Espero, Vice Chair

COMMITTEE ON COMMERCE, CONSUMER PROTECTION, AND HEALTH

Senator Rosalyn H. Baker, Chair
Senator Jill N. Tokuda, Vice Chair

Monday, March 19, 2018
3:15pm
Conference Room 225

HB 2110 MICROGRIDS.

STRONG SUPPORT

Aloha Chairs Inouye and Baker, Vice Chairs Espero and Tokuda, and Members 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 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 strongly supports the bill but finds the preamble to be misleading: "few microgrids have been developed, as their development has been inhibited by a number of factors, including interconnection barriers and a lack of standard terms."

That is false. Some homes and businesses are small microgrids. Large microgrids have not been developed because proposed microgrid owners have not participated in PUC dockets, do not understand the impact their systems can have on the grid, and are not familiar with secondary financial benefits their systems can achieve through demand response.

Mahalo
Henry Curtis, Executive Director



Hawaii Solar Energy Association
Serving Hawaii Since 1977

**TESTIMONY OF THE HAWAII SOLAR ENERGY ASSOCIATION
IN REGARD TO HB 2110 HD2, RELATING TO ENERGY RESILIENCY
BEFORE THE
SENATE COMMITTEE ON TRANSPORTATION AND ENERGY
AND THE
SENATE COMMITTEE ON COMMERCE, CONSUMER PROTECTION, AND
HEALTH
ON
MONDAY, MARCH 19TH, 2018**

Chair Inouye, Chair Baker, Vice-Chair Espero, Vice-Chair Cullen, 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 HD2. 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 HD2 and we urge this committee to pass this measure.

Thank you for the opportunity to testify.



Email: communications@ulupono.com

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

Monday, March 19, 2018 — 3:15 p.m. — Room 225

Ulupono Initiative Strongly Supports HB 2110 HD 2 with an Amendment, Relating to Resiliency

Dear Chair Inouye, Vice Chair Espero, Chair Baker, Vice Chair Tokuda, and Members of the Committees:

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 2, 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.

Investing in a Sustainable Hawai'i

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 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 these committees’ efforts to look at policies that support renewable energy production.

Thank you for this opportunity to testify.

Respectfully,

Kyle Datta
General Partner



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

March 19, 2018, 3:15 P.M.

Room 225

(Testimony is 2 pages long)

TESTIMONY IN STRONG SUPPORT OF HB 2110 HD2

Aloha Chairs Inouye and Baker, Vice Chairs Espero and Tokuda, and Senators:

Blue Planet Foundation **strongly supports** HB 2110 HD2, 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.

We respectfully ask that your committees amend HB 2110 HD2 to take effect upon approval.

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

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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.

House Bill 2110 HD2 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.

Thank you for the opportunity to testify.



Before the Senate Committees on Transportation and Energy & Commerce, Consumer Protection, and Health
Monday, March 19, 2018, room 225, 3:15 p.m.
HB 2110 HD 2: RELATING TO RESILIENCY

Aloha Chairs Inouye and Baker, Vice Chairs Espero and Tokuda, and members of the Committee,

On behalf of the Distributed Energy Resources Council of Hawaii (“DER Council”), I would like to testify in strong support for HB 2110 HD 2, which directs the Public Utilities Commission to establish a microgrid services tariff to facilitate and encourage the development and use of energy resilient microgrids. 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.

Microgrids have the unique feature of being able to operate both in parallel with the electrical grid and also independently from the electrical grid depending upon the current best use of the renewable energy installation. This extremely flexible resource can support various grid services such as integrating energy storage and demand response, load shifting, frequency and voltage support, in addition to providing an independent source of power during grid emergencies. As Hawaii begins to focus on grid resiliency, the development of microgrids should be a substantial part of the planning process.

However, there is no clear regulatory pathway at this point for the development of microgrids and the means by which the utility will integrate the microgrid function. Although several other distributed energy resources dockets are currently active at the PUC, none of the current dockets focus specifically on microgrids. This subject is complex enough to warrant a separate deliberation, and we should not expect that it would be inserted into the current ongoing dockets.

Therefore, DERC strongly supports HB 2110 HD 2. Now is the time to provide substantial support for Hawaii’s grid resiliency.

Thank you for the opportunity to testify

Leslie Cole-Brooks
Executive Director
DER Council of Hawaii



ORGANIZING *for* ACTION

To: The Senate Committee on Transportation and Energy
From: Brodie Lockard, OFA Hawaii, 262-1285
Date: Monday, March 19, 2018

In support of HB 2110

Dear Chair Inouye, Vice Chair Espero and Committee members--

I am the Hawaii Climate Lead for Organizing for Action, a progressive group that played a lead in electing President Barack Obama twice. OFA Hawaii supports HB 2110.

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--an apartment complex, a hotel, a school campus--to produce their own energy and be self-sufficient in an emergency.

Microgrids can also provide valuable services to the public utility electricity grid, including energy storage and demand response, to support load shifting, frequency response, and voltage control, among other ancillary services.

Few microgrids have been proposed in Hawaii, in part because of a lack of standard terms regarding the value of services exchanged between the microgrid operator and the utility.

HB 2110 directs the PUC to develop a standard tariff for microgrid services (properly valuing the grid services that a microgrid can provide to the larger grid). The idea is to unlock the microgrid market by creating clear, standard terms for microgrids to plug-in--similar to what NEM did for rooftop solar. Otherwise those who want to build a microgrid and interconnect are left to negotiate with HECO (and we know who holds the cards in those negotiations).

Please support HB 2110. Thank you for this opportunity to submit testimony.

Brodie Lockard
Hawaii Climate Lead, Organizing for Action



To: The Senate Committee on Transportation and Energy
From: Sherry Pollack, 350Hawaii.org
Date: Monday, March 19, 2018

In support of HB 2110 HD2

Dear Chair Inouye, Vice Chair Espero and Committee members--

I am the Vice President of the Hawaii chapter of 350.org, the largest international organization dedicated to fighting climate change. 350Hawaii.org supports HB 2110 HD2.

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--an apartment complex, a hotel, a school campus--to produce their own energy and be self-sufficient in an emergency.

Microgrids can also provide valuable services to the public utility electricity grid, including energy storage and demand response, to support load shifting, frequency response, and voltage control, among other ancillary services.

Few microgrids have been proposed in Hawaii, in part because of a lack of standard terms regarding the value of services exchanged between the microgrid operator and the utility.

HB 2110 HD2 directs the PUC to develop a standard tariff for microgrid services (properly valuing the grid services that a microgrid can provide to the larger grid). The idea is to unlock the microgrid market by creating clear, standard terms for microgrids to plug-in--similar to what NEM did for rooftop solar. Otherwise those who want to build a microgrid and interconnect are left to negotiate with HECO.

Please support HB 2110 HD2. Thank you for this opportunity to submit testimony.

Sherry Pollack
Vice President, 350Hawaii.org

HB-2110-HD-2

Submitted on: 3/18/2018 9:48:51 PM

Testimony for TRE on 3/19/2018 3:15:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Melodie Aduja	Testifying for OCC Legislative Priorities Committee, Democratic Party of Hawai'i	Support	No

Comments:

To the Honorable Lorraine R. Inouye, Chair; the Honorable Will Espero, Vice-Chair, and Members of the Committee on Transportation and Energy:

To the Honorable Rosalyn H. Baker, Chair; the Honorable Jill N. Tokuda, Vice-Chair, and Members of the Committee on Commerce, Consumer Protection and Health:

Good afternoon, my name is Melodie Aduja. I serve as Chair of the Oahu County Committee ("OCC") on Legislative Priorities of the Democratic Party of Hawaii. Thank you for the opportunity to provide written testimony on **HB2110 HD2**, relating to Energy Resiliency; and the Microgrid Services Tariff.

The OCC Legislative Priorities Committee is in favor of **HB2110 HD2** and support its passage.

HB2110 HD2, is in alignment with the Platform of the Democratic Party of Hawai'i ("DPH"), 2016, as it authorizes the establishment of a Natural Energy Laboratory of Hawaii Authority (NELHA) microgrid demonstration project for the generation, storage, and distribution of renewable energy on property controlled by NELHA.

The DPH Platform states that "Electricity rates in Hawai'i are among the highest in the nation despite the fact that we enjoy an abundance of sunshine year-round. Electric utility companies and cooperatives must open the grid to alternative power sources including solar panels and geothermal energy. We support the effort of our government officials to require utilities to provide for the maximum, comprehensive, integrated use of renewable energy and associated technologies such as storage and smart grid technologies." (Platform of the DPH, P. 9, Lines 458-462 (2016)).

Given that **HB2110 HD2** authorizes the establishment of a Natural Energy Laboratory of Hawaii Authority (NELHA) microgrid demonstration project for the generation, storage, and distribution of renewable energy on property controlled by NELHA, it is the position of the OCC Legislative Priorities Committee to support this measure.

Thank you very much for your kind consideration.

Sincerely yours,
/s/ Melodie Aduja
Melodie Aduja, Chair, OCC Legislative Priorities Committee
Email: legislativepriorities@gmail.com, Text/Tel.: (808) 258-8889



HB2110

Energy Resiliency; Microgrid Services Tariff

March 19 2018

Relating to Resiliency

Aloha Chairs Inouye, Baker, Vice Chairs Espero, Tokuda, and members of the committee. The Sierra Student Coalition at the University of Hawai'i is in Support of HB2110 relating to energy.

HB2110 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, and 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.



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

SENATE COMMITTEE ON TRANSPORTATION AND ENERGY

SENATE COMMITTEE ON COMMERCE, CONSUMER PROTECTION, AND HEALTH

Monday, March 19, 2018 3:15PM Conference Room 225

In STRONG SUPPORT of HB 2110 HD2 Relating to resiliency

Aloha Chairs Inouye and Baker, Vice Chairs Espero and Tokuda and members of the Committees,

On behalf of our 20,000 members and supporters, the Sierra Club of Hawai'i, a member of the Common Good Coalition, **strongly supports HB 2110 HD2**, which 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 HD2 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 an 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 **strong support of HD 2110 HD2.**

HB-2110-HD-2

Submitted on: 3/18/2018 12:40:14 PM

Testimony for TRE on 3/19/2018 3:15:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Susan Douglas	Individual	Support	No

Comments:

HB-2110-HD-2

Submitted on: 3/18/2018 1:27:35 PM

Testimony for TRE on 3/19/2018 3:15:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Kim Jorgensen	Individual	Support	No

Comments:

I strongly support this excellent bill; there is no time to lose for the PUC to encourage and facilitate the development and use of energy resilient microgrids.

HB-2110-HD-2

Submitted on: 3/18/2018 11:57:07 AM

Testimony for TRE on 3/19/2018 3:15:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Denise Boisvert	Individual	Support	No

Comments:

I am in strong support of HB 2110 which directs the PUC to establish a microgrid services tariff to encourage and facilitate the development and use of energy resilient microgrids.

Let's do this now; the future is closer than we think!

Sincerely,

Denise Boisvert

Waikiki

HB-2110-HD-2

Submitted on: 3/18/2018 7:37:15 PM

Testimony for TRE on 3/19/2018 3:15:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Philipp LaHaela Walter	Individual	Support	No

Comments:

Aloha Chairs Inouye and Baker, Vice Chairs Espero and Tokuda, and members of the Committees,

My name is Philipp LaHaela Walter and I live in Moiliili, Honolulu. I am in **STRONG SUPPORT** of this important bill that moves Hawai'i toward our goal of 100% renewable energy by 2045. We have a long way to go and many things to do before we reach this admirable and ambitious goal, which showcases to the world our commitment to combat climate change and preserve our beautiful planet for generations to come. This measure is one of several that will contribute to these important efforts. I urge the committees to pass this bill!

Mahalo for the opportunity to testify today.

HB-2110-HD-2

Submitted on: 3/18/2018 8:39:14 PM

Testimony for TRE on 3/19/2018 3:15:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Randy Ching	Individual	Support	No

Comments:

Aloha Chairs Inouye and Baker, Vice Chairs Espero and Tokuda, and members of the Committees,

I am in **STRONG SUPPORT** of HB2110 HD2. Energy efficiency is one of our low hanging fruit. GEMS should play a valuable role in encouraging energy efficiency. GEMS has not been utilized to its maximum capacity. It should be leveraged with matching funds whenever possible.

Mahalo for the opportunity to testify today.

Randy Ching / Honolulu

HB-2110-HD-2

Submitted on: 3/19/2018 12:40:01 AM

Testimony for TRE on 3/19/2018 3:15:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Janet Pappas	Individual	Support	No

Comments:

HB-2110-HD-2

Submitted on: 3/17/2018 4:17:11 PM

Testimony for TRE on 3/19/2018 3:15:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Benton Kealii Pang, Ph.D.	Individual	Support	No

Comments:

HB-2110-HD-2

Submitted on: 3/17/2018 7:24:46 PM

Testimony for TRE on 3/19/2018 3:15:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Kathy Shimata	Individual	Support	No

Comments:

Microgrids protect energy transmission for everyone.

HB-2110-HD-2

Submitted on: 3/19/2018 10:17:01 AM

Testimony for TRE on 3/19/2018 3:15:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Kylie Cruz	Individual	Support	No

Comments:

I live in Sen. Ihara's district and strongly support this bill.

Kylie Wager Cruz



HB2110

Energy Resiliency; Microgrid Services Tariff

March 19 2018

Relating to Resiliency



Aloha Chairs Inouye, Baker, Vice Chairs Espero, Tokuda, and members of the committee. My name is Maxim Poudrier-Tudan and I am a student at the University of Hawai'i. I am in Support of HB2110 relating to energy.

HB2110 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, and 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.