NATURAL ENERGY LABORATORY OF HAWAII AUTHORITY

An Authority of the State of Hawaii attached to the Department of Business, Economic Development & Tourism

Statement of
Gregory P. Barbour
Executive Director
Natural Energy Laboratory of Hawaii Authority
before the

HOUSE COMMITTEE ON FINANCE

Friday, February 23, 2018
2:00 pm
State Capitol, Conference Room 308

in consideration of

HB 2460 HD 2
RELATING TO MICROGRIDS.

The Natural Energy Laboratory of Hawaii Authority (NELHA) supports HB 2460 HD 2 which enables microgrid demonstration projects in Hawaii.

The implementation of microgrid technology at NELHA has long been a key component of NELHA's Distributed Energy Resources (DER) strategy and its master plan which were recently updated in 2013 and 2011 respectively.

Many reports over the years have recognized that we provide an ideal location to address deployment challenges; provide power to pump seawater to the businesses in the park that require a continuous supply to avoid catastrophic losses; understand integration into the island-wide utility grid; and, perhaps most importantly how microgrids can help the island-wide grid.

NELHA possesses a unique combination of physical infrastructure and access to clean energy resources. More specifically, NELHA's strategic location on Keahole Point results in our

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technology park being a self-contained "branch" served by two separate feeder lines from the main island-wide transmission grid. In addition, as a seawater utility, we operate three main pump stations throughout the park with a high electrical demand of approximately 1 MW. NELHA has many components of a microgrid due to its development in the early 80s which includes ownership of switchgear and transformers in the Research Campus and Farm Compound as well as the recent development of Supervisory Control and Data Acquisition System (SCADA) which includes a vast array of utility grade power monitoring devices, computer storage and display system. We also have many existing and planned renewable energy demonstration projects ranging from energy generation (ocean thermal energy conversion, concentrated solar power, PV, and biofuels) to energy storage (electrical energy storage test bed, and hydrogen production and storage).

We put considerable effort into building strategic relationships over the past several years with key players in this field including: Hawaiian Electric and Light Company (HELCO), State Energy Office, UH Natural Energy Institute; the County of Hawaii; National Renewable Energy Laboratory and Sandia National Laboratory. This has led to numerous projects and official MOU with HELCO, County of Hawaii and Sandia National Labs.

This measure would facilitate and accelerate the implementation of microgrid technology at NELHA by assisting us in applying for grant funding. In addition, while NELHA has assembled various microgrid components, this measure would allow NELHA to adopt a more comprehensive approach with respect to its DER by removing current limitations. Our vision is to deploy microgrid technology only within the park to serve our own demand from the seawater pump stations and the park clients' needs. We do not intend to wheel electrical power outside of the park boundaries.

The lessons learned here at NELHA will be directly applicable to the rest of Hawaii to help in understanding the benefits of microgrids to island wide grids. In addition, it is important to note that a recent national study found that lower costs for electricity increases economic growth. It will also help fulfill NELHA's mission of economic development in West Hawaii by stabilizing electrical costs within the park, assisting with the commercialization of renewable energy technologies and diversifying the economy. Finally, it is important to note that microgrids can isolate themselves from the larger electricity grid in a time of emergency and thereby add energy resiliency into our communities, thereby increasing public safety and security.

Thank you for the opportunity to offer these comments.

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

February 23, 2018
2:00 p.m.

MEASURE: H.B. No. 2460 HD2
TITLE: RELATING TO MICROGRIDS.

Chair Luke and Members of the Committee:

DESCRIPTION:

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. (HB2460 HD2)

POSITION:

The Public Utilities Commission ("Commission") offers the following comments for 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 larger grid in times of emergency.

The Commission notes that the Legislature is also considering H.B. 2110, which would require the Commission to open a proceeding by July 1, 2018, to establish a microgrid services tariff. As such, Section 2 (d) of H.B. 2460 may not be necessary.

The Commission further 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 if the proposed language related to wheeling could result in undue subsidization of the NELHA microgrid demonstration project by other customers, absent Commission review.

Thank you for the opportunity to testify on this measure.

SIERRA CLUB OF HAWAIʻI
MĀLAMA I KA HONUA. Cherish the Earth.

HOUSE COMMITTEE ON FINANCE

Friday, February 23, 2018 2:00PM Conference Room 308

In SUPPORT of HB 2460 HD2 Relating to microgrids

Aloha Chair Luke, Vice Chair Cullen and members of the Committee,

On behalf of our 20,000 members and supporters, the Sierra Club of Hawaiʻi, a member of the Common Good Coalition, **strongly supports HB 2460 HD2**, which seeks to create a microgrid demonstration project through the Natural Energy Laboratory of Hawaii (NELHA) that generates, stores, and distributes renewable energy on NELHA property.

In general, the Sierra Club of Hawaiʻi *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 2460 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.

The NELHA microgrid demonstration project also allows the study of various impacts associated with the development of microgrids, such as utility wheeling, time-of- use export tariffs, and grid services. This project also helps stimulate local economies by providing good paying jobs and lower energy costs, lowering the energy cost burden in the area, and contributing renewable generation at scale to the state.

Although not specifically called out within the statute as written, we propose that any energy generated by this project and sold to off-site consumers be prioritized for low and middle income communities, Department 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.

Thank you for the opportunity to testify in **strong support of HD 2460 HD2**.

Hawaii Solar Energy Association
Serving Hawaii Since 1977

TESTIMONY OF THE HAWAII SOLAR ENERGY ASSOCIATION
IN REGARD TO HB 2460 HD2, RELATING TO RENEWABLE ENERGY, MICROGRID DEMONSTRATION PROJECTS
BEFORE THE
HOUSE COMMITTEE FINANCE
ON
FRINDAY, FEBRUARY 23, 2018

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

The HSEA was founded in 1977 to further solar energy and related arts, sciences and technologies with concern for the ecologic, social and economic fabric of the Hawaiian Islands. Our membership includes the vast majority of locally owned and operated solar installers, contractors, distributors, manufacturers, and inspectors across all islands.

The HSEA **supports** HB 2460 HD2. This measure seeks to create a microgrid demonstration project through the Natural Energy Laboratory of Hawaii (NELHA) that generates, stores, and distributes renewable energy on NELHA property.

Generally, renewable microgrid are a necessary part of Hawaii's energy infrastructure as the state grows closer to its goal of 100% renewable energy by 2045. A recent study by the Rocky Mountain Institute found that renewable microgrids in island communities reduces costs, build resiliency and grid stability, and contribute to the creation of a smarter grid.[1] An interesting case study of the island nation of Cuba, which ranks second in the world on installed distributed generation after Denmark, found that "microgrids at high-consuming locations could help to avoid transmission and distribution related losses as tourism, demand from private businesses, and strain on the grid grows."[2]

A microgrid, per this bill, is a small scale renewable energy electrical grid that produces, stores, and transmits electricity for use by consumers both on and off the NELHA property. By providing a test case for a resilient renewable microgrid that can provide energy for consumers on and off site, the NELHA demonstration project sets an important benchmark for how microgrids could be constructed throughout the state. Utility dockets regarding distributed generation and community based renewable energy

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[1] Bunker, Kaitlyn. "Renewable Microgrids: Profiles From Islands and Remote Communities Across the Globe." *OurEnergyPolicyorg Renewable Microgrids Profiles From Islands and Remote Communities Across the Globe Comments*, 1 Nov. 2015, www.ourenergypolicy.org/renewable-microgrids-profiles-from-islands-and-remote-communities-across-the-globe/.

[2] Panfil, et al. "What's next for Cuba's Electricity Sector?" *The Electricity Journal*, vol. 30, no. 8, 2017, pp. 38–44.

(CBRE) projects would benefit from a variety of data produced by this facility secondary to its energy producing and transmitting purposes.

An added benefit of legislation regarding microgrid, with HB 2460 in particular, is that they directly address the question of utility wheeling. Wheeling is the transmission of energy from within and electrical grid to an outside electrical load, typically via transmission lines. In many states, wheeling is allowed between utility generators and load receivers in a given service area. Capital costs are recovered through transmission fee mechanisms like transmission access fees. The question of how wheeling will be accomplished by microgrid operators to loads outside of their property lines will eventually need to be answered. The NELHA demonstration project outlined in HB 2460 allows energy consumers, developers, and utility operators the chance to observe and refine different mechanisms by which this might be accomplished within a controlled environment.

Now more than ever renewable microgrids that build resiliency and stability into island electrical grids should be seriously considered as a path to 100% RPS by 2045. In the wake of Hurricane Maria, Puerto Rico released proposed rules on microgrid development to strengthen its grid against extreme weather.[3] As of last month more than 30% of Puerto Ricans are without electricity.[4] Puerto Rico is a wake up call for Hawaii. As a state we must decide if we are going to stand by and wait until a major disaster hits our islands, or be proactive with intelligent and timely energy policy.

We **strongly support** HB 2460 HD2 and we urge this committee to pass this measure.

Thank you for the opportunity to testify.

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[3] Staff, PREC. *REGULATION ON MICROGRID DEVELOPMENT*. MI ed., CEPR, ser. 0001, 2018, *REGULATION ON MICROGRID DEVELOPMENT*.

[4] Savransky, Rebecca. "Nearly Half a Million Customers Are Still without Power in Puerto Rico."*TheHill*, 25 Jan. 2018, thehill.com/blogs/blog-briefing-room/news/370744-nearly-half-a-million-customers-still-dont-have-power-in-puerto.

To: The House Committees on Finance
From: Brodie Lockard, 350Hawaii.org, 808-262-1285
Date: Friday February 23, 2018

In support of HB 2460 HD2

Dear Chair Luke, Vice Chair Cullen and Committee members—

I am the founder of the Hawaii chapter of 350.org, the largest international organization dedicated to fighting climate change. 350Hawaii.org strongly supports HB 2460 HD2..

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.

Now more than ever, renewable microgrids that build resiliency and stability into island electrical grids should be seriously considered as part of our path to 100% RPS by 2045. Hurricane Maria and the devastation it left in Puerto Rico are a wake-up call for Hawaii to become more proactive in our energy policy.

Microgrids provide greater resilience because they can separate from the electricity grid if it fails. 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.

HB2460 HD2 will help Hawaii become energy self-sufficient.

Thank you for this opportunity to submit testimony.

Brodie Lockard
Founder, 350Hawaii.org

HB2460 HD2

Renewable Energy; Microgrid Demonstration Project

February 23, 2018, 2:00p.m.

Relating to Microgrids

Aloha Chair Luke, Vice Chair Cullen, and members of the committee. My name is Maxim Poudrier-Tudan and I am with the Sierra Student Coalition at the University of Hawaii at Manoa. The Sierra Student Coalition stands in support of HB2460 HD2 on renewable energy; microgrid demonstration project.

HB2460 HD2 is imperative for Hawai'i to reach its goal of 100% renewable energy by 2045. 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 will open the door for the for the establishment of many more sites such as this one which will push this state in the direction it chose when adopting the Paris Climate Accords.

Microgrids help create clean forms of energy independently from electric corporation and separate from the electricity grid if it were to fail. Hawai'i and the planet needs more forms of renewable energy now than ever. Clean renewable energy is one of the greatest ways to combat climate change with the reduction of Carbon Dioxide in the air, and less reliance on fossil fuels. The benefits for HB2460 HD2 cannot be overlooked.

Thank you for allowing the Sierra Student Coalition to testify.

Testimony before the House Committee on Consumer Protection & Commerce
February 23, 2018
2:00 pm
Conference Room 308
H.B. 2460 HD2 – Relating to Resiliency

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

Chair Luke, Vice Chair Cullen, 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 the intent but **oppose** H.B. 2460 HD2.

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.

Currently, there is another bill, H.B. 2110 HD2, that encourages and facilitates the development and use of microgrids through the establishment of a standard microgrid services tariff and directs the PUC to open a proceeding to establish a microgrid services tariff by July 1, 2018. The Companies support H.B. 2110 HD2 and believe it will better accomplish the intent of H.B. 2460 HD2.

The Companies further suggest that the NELHA site be identified as the first demonstration microgrid project after the rules and tariffs are established for microgrids per H.B. 2110 HD 2.

Thank you for the opportunity to provide this testimony.

HB-2460-HD-2
Submitted on: 2/21/2018 1:02:47 PM
Testimony for FIN on 2/23/2018 2:00:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Jacqui Hoover	Hawaii Island Economic Development Board	Support	No

Comments:

The Hawai`i Island Economic Development Board (HIEDB) strongly supports HB2460 HD2 and establishment of a microgrid demonstration project at the Natural Energy Laboratory of Hawai`i Authority (NELHA). This effort will contribute towards necessary research and testing required to achieve our state's energy goals.

Mahalo for this opportunity to speak in support of HB2460 HD2.

HB-2460-HD-2
Submitted on: 2/21/2018 1:11:54 PM
Testimony for FIN on 2/23/2018 2:00:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Jacqui Hoover	Hawaii Leeward Planning Conference	Support	No

Comments:

Hawaii Leeward Planning Conference (HLPC) strongly supports HB2460 HD2 and establishment of a migrogrid demonstration project at the Natural Energy Laboratory of Hawaii, to further support achievement of the state's energy goals.

Mahalo for this opportunity to speak in support of HB2460 HD2.

Email: communications@ulupono.com

HOUSE COMMITTEE ON FINANCE
Friday, February 23, 2018 — 2:00 p.m. — Room 308

Ulupono Initiative Strongly Supports HB 2460 HD 2 with an Amendment, Relating to Microgrids

Dear Chair Luke, Vice Chair Cullen, 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 2460 HD 2, which establishes a Natural Energy Laboratory of Hawai'i Authority (NELHA) microgrid demonstration project, because it aligns with our goal of increasing the production of clean, renewable energy in Hawai'i.

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 businesses that rely upon a continuous supply of electricity from a microgrid, such as hospitals and hotels, certain microgrids need to sell their power to those businesses without being considered a public utility.

NELHA in Kailua-Kona is an excellent example of this, where the fisheries businesses would suffer catastrophic losses in the event of power loss, and it is cheaper to provide reliability for the microgrid than the individual business. NELHA is an important center of aquaculture and energy innovation that has demonstrated that a state authority can be effective and profitable at promoting innovation and commerce. NELHA already demonstrates the state's only operational Ocean Thermal Energy Conversion facility, seawater cooling, and an innovative solar gateway center. NELHA will soon be

demonstrating grid side storage technology in partnership with HELCO, Sandia Labs, and Ulupono. It is important to NELHA's expansion and for the economic security of the commercial tenants to have continuous power, which will be enabled by a microgrid. For all of these reasons, the provisions in this bill are highly desirable.

The legislation should ensure that enabling microgrids does not cause grid defection without the appropriate exit charges to guarantee the remaining grid customers are not harmed. This can be addressed by amending 269 (e) to read:

(e) "The Public Utilities Commission may take any steps the commission deems necessary to enable and compel electric public utilities to allow the development of the natural energy laboratory of Hawaii authority microgrid demonstration project by non-utilities. These steps may include issuing related orders, amending or adopting related rules, working with permitting agencies or other authorities to grant exemptions, or other steps necessary to enable the development of the natural energy laboratory of Hawaii authority microgrid demonstration project." Starting on page 5, line 17, add, "The Public Utilities Commission shall determine what exit charges are necessary to prevent the remaining ratepayers from paying for the embedded costs that would have otherwise been paid by the microgrid customers."

In addition, this legislation provides the utility, regulators, and stakeholders with a test case for microgrids, which may contribute to supporting the state's energy goals.

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

HB-2460-HD-2
Submitted on: 2/21/2018 11:16:08 PM
Testimony for FIN on 2/23/2018 2:00:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Jun Shin	Young Progressives Demanding Action - Hawaii	Support	No

Comments:

HB-2460-HD-2
Submitted on: 2/22/2018 1:50:09 PM
Testimony for FIN on 2/23/2018 2:00:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Melodie Aduja	OCC Legislative Priorities Committee, Democratic Party of Hawaii	Support	No

Comments:

HB-2460-HD-2
Submitted on: 2/21/2018 7:38:55 PM
Testimony for FIN on 2/23/2018 2:00:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
B.A. McClintock	Individual	Support	No

Comments:

HB2460 HD2, which establishes a microgrid demonstration project, aligns with our goals of producing clean, renewable energy. We need more projects like this to make renewable energy a more significant part of our economy. I strongly support this bill.

HB-2460-HD-2
Submitted on: 2/21/2018 8:14:09 PM
Testimony for FIN on 2/23/2018 2:00:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
John Nix	Individual	Support	No

Comments:

- HB2460 HD2, which establishes a microgrid demonstration project, aligns with our goals of producing clean, renewable energy. We need more projects like this to make renewable energy a more significant part of our economy. I strongly support this bill.

-Now more than ever renewable microgrids that build resiliency and stability into island electrical grids should be seriously considered as a path to 100% RPS by 2045. Hurricane Maria and the devastation it left in Puerto Rico are a wake-up call for Hawaii to become more proactive in our energy policy.

-Microgrids provide greater resilience because these grids are able to separate from the electricity grid if it fails.

-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.

HB-2460-HD-2
Submitted on: 2/21/2018 8:40:16 PM
Testimony for FIN on 2/23/2018 2:00:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Patricia Blair	Individual	Support	No

Comments:

HB-2460-HD-2
Submitted on: 2/21/2018 10:04:24 PM
Testimony for FIN on 2/23/2018 2:00:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Jonathan Boyne	Individual	Support	No

Comments:

HB2460 HD2, which establishes a microgrid demonstration project, aligns with our goals of producing clean, renewable energy. We need more projects like this to make renewable energy a more significant part of our economy. I strongly support this bill.

-Now more than ever renewable microgrids that build resiliency and stability into island electrical grids should be seriously considered as a path to 100% RPS by 2045. Hurricane Maria and the devastation it left in Puerto Rico are a wake-up call for Hawaii to become more proactive in our energy policy.

Microgrids provide greater resilience because these grids are able to separate from the electricity grid if it fails.

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.

HB-2460-HD-2
Submitted on: 2/21/2018 10:38:06 PM
Testimony for FIN on 2/23/2018 2:00:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Josephine	Individual	Support	No

Comments:

HB2460 HD2, which establishes a microgrid demonstration project, aligns with our goals of producing clean, renewable energy. We need more projects like this to make renewable energy a more significant part of our economy. I strongly support this bill.

HB-2460-HD-2
Submitted on: 2/21/2018 10:39:49 PM
Testimony for FIN on 2/23/2018 2:00:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Samuel John	Individual	Support	No

Comments:

HB-2460-HD-2
Submitted on: 2/22/2018 7:42:04 AM
Testimony for FIN on 2/23/2018 2:00:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
chi guyer	Individual	Support	No

Comments:

please pass. mahalo chi pilialoha guyer of maui

HB-2460-HD-2
Submitted on: 2/22/2018 7:45:25 AM
Testimony for FIN on 2/23/2018 2:00:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Jordan Moniuszko	Individual	Support	No

Comments:

- HB2460 HD2, which establishes a microgrid demonstration project, aligns with our goals of producing clean, renewable energy. We need more projects like this to make renewable energy a more significant part of our economy. I strongly support this bill.

1. more than ever renewable microgrids that build resiliency and stability into island electrical grids should be seriously considered as a path to 100% RPS by 2045. Hurricane Maria and the devastation it left in Puerto Rico are a wake-up call for Hawaii to become more proactive in our energy policy.

-Microgrids provide greater resilience because these grids are able to separate from the electricity grid if it fails.

-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.

HB-2460-HD-2
Submitted on: 2/22/2018 9:02:09 AM
Testimony for FIN on 2/23/2018 2:00:00 PM

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

Comments:

HB-2460-HD-2
Submitted on: 2/22/2018 9:16:24 AM
Testimony for FIN on 2/23/2018 2:00:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Severine Busquet	Individual	Support	No

Comments:

Hi,

HB2460 HD2, which establishes a microgrid demonstration project, aligns with our goals of producing clean, renewable energy. We need more projects like this to make renewable energy a more significant part of our economy. I strongly support this bill.

Thanks for your attention

Severine

HB-2460-HD-2
Submitted on: 2/22/2018 9:59:40 AM
Testimony for FIN on 2/23/2018 2:00:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Taurie Kinoshita	Individual	Support	No

Comments:

HB2460 HD2, which establishes a microgrid demonstration project, aligns with our goals of producing clean, renewable energy. We need more projects like this to make renewable energy a more significant part of our economy. I strongly support this bill

HB-2460-HD-2
Submitted on: 2/22/2018 10:12:51 AM
Testimony for FIN on 2/23/2018 2:00:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Dana Jenkins	Individual	Support	No

Comments:

I strongly support HB2460 HD2, which establishes a microgrid demonstration project, aligns with our goals of producing clean, renewable energy. We need more projects like this to make renewable energy a more significant part of our economy. Microgrids provide greater resilience because these grids are able to separate from the electricity grid if it fails. 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.

HB-2460-HD-2
Submitted on: 2/22/2018 10:57:34 AM
Testimony for FIN on 2/23/2018 2:00:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Javier Mendez-Alvarez	Individual	Support	No

Comments:

HB-2460-HD-2
Submitted on: 2/22/2018 11:06:08 AM
Testimony for FIN on 2/23/2018 2:00:00 PM

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

Comments:

I support HB2460 to fund a microgrid demonstration project at the NELHA facility because microgrids will play a crucial role in accomplishing the State's push toward 100% renewable energy.

In this case, you need money to save money!

HB-2460-HD-2
Submitted on: 2/22/2018 11:13:07 AM
Testimony for FIN on 2/23/2018 2:00:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Merle Hayward	Individual	Support	No

Comments:

SUPPORT

HB-2460-HD-2
Submitted on: 2/22/2018 11:19:54 AM
Testimony for FIN on 2/23/2018 2:00:00 PM

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

Comments:

I support HB-2460.

HB-2460-HD-2
Submitted on: 2/22/2018 11:58:41 AM
Testimony for FIN on 2/23/2018 2:00:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Shannon Rudolph	Individual	Support	No

Comments:

Support

HB-2460-HD-2
Submitted on: 2/22/2018 1:43:32 PM
Testimony for FIN on 2/23/2018 2:00:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Sarah Toole	Individual	Support	No

Comments:

I strongly support this measure.

Sarah Toole

1128 Ala Napunani St 96818

UH Manoa Political Science student

HB-2460-HD-2
Submitted on: 2/22/2018 2:06:54 PM
Testimony for FIN on 2/23/2018 2:00:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Joan Gannon	Individual	Support	No

Comments:

LATE

HB-2460-HD-2
Submitted on: 2/22/2018 4:06:11 PM
Testimony for FIN on 2/23/2018 2:00:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Laura Gray	Individual	Support	No

Comments:

LATE

HB-2460-HD-2
Submitted on: 2/22/2018 4:06:20 PM
Testimony for FIN on 2/23/2018 2:00:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Sandra Fujita	Individual	Support	No

Comments:

LATE

HB-2460-HD-2
Submitted on: 2/22/2018 5:07:32 PM
Testimony for FIN on 2/23/2018 2:00:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Jennifer Milholen	Individual	Support	No

Comments:

LATE

HB-2460-HD-2
Submitted on: 2/22/2018 5:15:15 PM
Testimony for FIN on 2/23/2018 2:00:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Sandra Fujita	Individual	Support	No

Comments:

LATE

HB-2460-HD-2
Submitted on: 2/22/2018 7:59:37 PM
Testimony for FIN on 2/23/2018 2:00:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Cory Harden	Individual	Support	No

Comments:

LATE

HB-2460-HD-2
Submitted on: 2/22/2018 8:35:10 PM
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Submitted By	Organization	Testifier Position	Present at Hearing
Sherry Pollack	Individual	Support	No

Comments:

I strongly support HB2460 HD2 because it aligns with our goals of producing clean, renewable energy. We need more projects like this to make renewable energy a more significant part of our economy.

Now more than ever renewable microgrids that build resiliency and stability into island electrical grids should be seriously considered as a path to 100% RPS by 2045. Hurricane Maria and the devastation it left in Puerto Rico are a wake-up call for Hawaii to become more proactive in our energy policy. Please support this bill.

Thank you for the opportunity to testify.