



NEIL ABERCROMBIE
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DEPUTY DIRECTOR

TO THE HOUSE COMMITTEE ON
CONSUMER PROTECTION & COMMERCE

THE TWENTY-SEVENTH LEGISLATURE
REGULAR SESSION OF 2014

MONDAY, FEBRUARY 10, 2014
2:45 P.M.

TESTIMONY OF JEFFREY T. ONO, EXECUTIVE DIRECTOR, DIVISION OF
CONSUMER ADVOCACY, DEPARTMENT OF COMMERCE AND CONSUMER
AFFAIRS, TO THE HONORABLE ANGUS L. K. MCKELVEY, CHAIR,
AND MEMBERS OF THE COMMITTEE

HOUSE BILL NO. 1943 H.D.1 - RELATING TO THE MODERNIZATION
OF THE HAWAII ELECTRIC SYSTEM

DESCRIPTION:

This measure proposes to require the Public Utilities Commission to adopt rules for improved accessibility to connect to the Hawaii electric system for any individual or business. It also requires the Commission to initiate a proceeding no later than July 1, 2014, to discuss upgrades to the Hawaii electric system for anticipated growth of customer generation.

POSITION:

The Division of Consumer Advocacy supports the intent of this measure with comments.

COMMENTS:

The Consumer Advocate is aware of the number of technical issues that are arising due to the current state of the electric grids in the Hawaiian islands. The current electric grids are unable to accommodate all of the individuals and businesses that are interested in interconnecting distributed generation systems, more commonly known as photovoltaic systems or PV systems, without some delay, additional studies, and/or costs. The current electric grids also constrain the ability to add larger renewable energy projects as well.

The Consumer Advocate has concerns; however, with the mandate that each electric grid be modified to ensure that “any person, business, or entity can operate customer generation regardless of where that person, business, or entity is located.” Besides the issues associated with upgrading the electric grid, there are also issues that need to be addressed with respect to the costs that non-participants, or entities that cannot or have not installed their own customer generation, must bear. If the grids must be upgraded to allow every customer to interconnect, even if they cannot (e.g., a low income resident living in a rental unit) or should not (e.g., a resident or business that may be located close to a mountain that blocks access to the afternoon sun), the costs of such upgrades on all customers may be unreasonable. The Consumer Advocate urges this committee to be aware that there may be unintended, adverse consequences on ratepayers if this measure is passed.

The issue of how the grid should be upgraded and the evaluation of the costs associated with such upgrades are expected to be analyzed in the recommended actions identified by the final report filed by the independent facilitator in Docket No. 2011-0206, which was the Commission’s Reliability Standards Working Group proceeding. Until those actions have been completed, the proposed measure may be premature.

The Consumer Advocate and the Public Utilities Commission are currently working with a number of stakeholders on revising the parallel Senate version of this bill, S.B. No. 2656. The Consumer Advocate recommends deferral of this bill to allow the parties time to come to a mutually agreed upon draft that can be presented to both the House and the Senate.

Thank you for this opportunity to testify.



**DEPARTMENT OF BUSINESS,
ECONOMIC DEVELOPMENT & TOURISM**

NEIL ABERCROMBIE
GOVERNOR

RICHARD C. LIM
DIRECTOR

MARY ALICE EVANS
DEPUTY DIRECTOR

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Statement of
RICHARD C. LIM
Director
Department of Business, Economic Development, and Tourism
Before the
HOUSE COMMITTEE ON CONSUMER PROTECTION AND COMMERCE

Monday, February 10, 2014
2:45 p.m.

State Capitol, Conference Room 325
in consideration of

HB 1943, HD 1
RELATING TO THE MODERNIZATION OF THE HAWAII ELECTRIC SYSTEM.

Chair McKelvey, Vice Chair Kawakami, and Members of the Committee.

The Department of Business, Economic Development, and Tourism (DBEDT) respectfully offers comments on HB 1943, HD1 which requires the Public Utilities Commission (PUC) to establish procedures to ensure any person, business, or entity can make a safe and reliable interconnection to the grid in a timely manner and for reasonable cost regardless of where that entity is located on the grid; requires the PUC to open a new docket; and appropriates general funds to the PUC to conduct the docket.

Through its established energy policy directives, DBEDT supports a diverse portfolio of renewable resources and integrated and modernized grids, all achieved through balancing technical, economic, environmental, and cultural considerations. DBEDT supports further grid analysis and exploring innovative measures to remove barriers to renewable penetration in the pursuit of a balanced, market-driven, cost-effective energy portfolio that meets and potentially exceeds Hawaii's aggressive clean energy mandates.

While DBEDT supports increased access to the grid for renewable generation projects, including a variety such as utility-scale, commercial-scale, and customer-owned generation projects, including solar photovoltaic, interconnection of energy generation projects constitute a transaction in the energy marketplace which is essentially a regulatory matter. As such, DBEDT respectfully defers to the PUC on the regulatory matters contained in this bill, particularly given its considerable recent attention and activity to address the matters raised by this measure.

Thank you for the opportunity to provide comments on HB 1943, HD1.



2/10/2014

House Committee on
Consumer Protection and Commerce

CPC

2:45 p.m.

TESTIMONY IN SUPPORT

HB 1943

Chair McKelvey, Vice Chair Kawakami, and Members of the Committee:

Hawaii PV Coalition is pleased to submit testimony in **strong support** of HB 1943, HD1.

It is indisputable that Hawaii's residents want solar. This makes sense, given that Hawaii continues to have electricity rates that are more than 3 times the national average. Along with energy conservation, "going solar" is the only way for Hawaii residents to get some relief from their sky-high electric bills. Installing solar also allows Hawaii residents to participate in Hawaii's clean energy goals and help reduce the state's dependence on imported fossil fuels.

Unfortunately, many homeowners are now being prevented from installing photovoltaic solar systems as a result of Hawaiian Electric's interconnection policies. These interconnection policies are in turn the result of aging utility infrastructure designed to support fossil-fuel generation rather than renewable energy.

HB 1943 will help solve this problem by initiating a grid modernization planning process. With a more modern grid, Hawaiian Electric will be able to deliver more stable power, with a higher renewable content to its customers, while at the same time allowing more Hawaii residents to install photovoltaic solar systems. Grid modernization will also allow solar installations to proceed more quickly and without requiring homeowners to pay for elaborate studies or costly grid upgrades.

For these reasons, the Hawaii PV Coalition strongly supports HB 1943, HD1 and urge you to pass it. Thank you for the opportunity to provide this testimony.

Sincerely,

Mark Duda
President, Hawaii PV Coalition

The Hawaii PV Coalition was formed in 2005 to support the greater use and more rapid diffusion of solar electric applications across the state. Working with business owners, homeowners and local and national stakeholders in the PV industry, the Coalition has been active during the state legislative sessions supporting pro-PV and renewable energy bills and helping inform elected representatives about the benefits of Hawaii-based solar electric applications.



Hawaii Solar Energy Association
Serving Hawaii Since 1977

Before the House Committee on Consumer Protection & Commerce
Monday, February 10, 2014, 2:45 p.m., room 325
HB 1943 HD1: Relating to the Modernization of the Hawaii Electrical System

Aloha Chair Lee, Vice-Chair Thielen, and members of the House Committee on Energy and Environmental Protection,

On behalf of the Hawaii Solar Energy Association (HSEA), I would like to testify in support for HB 1943 HD 1, which directs the public utilities commission to open a proceeding by July 1, 2014 to address the technical and economic barriers of interconnection for residential and commercial customers, and to consider whether the establishment of differentiated authorized rates of return on common equity are warranted to encourage utility investments in grid improvements. HSEA is a non-profit trade organization that has been advocating for solar energy since 1977, with an emphasis on residential distributed generation and commercial for both solar hot water (SHW) and photovoltaics (PV). We currently represent 79 companies, which employ thousands of local employees working in the solar industry. With 37 years of advocacy behind us, HSEA's goal is to work for a sustainable energy future for all of Hawaii.

Hawaii currently faces unprecedented challenges in moving forward in our clean energy goals as our current grid infrastructure has proved to be inadequate to the task of allowing residential and small commercial customers to install photovoltaics in a timely manner and for a reasonable cost. Although issues of grid access have been ongoing on the Big Island and Maui for the last few years, the industry has slowed significantly after the utility announced new interconnection rules on September 6, 2013.

The September announcement had an immediate impact on customers and the solar industry. In the month of December 2013 alone, there were only 1,140 permits issued on Oahu, a reduction from 1,925 permits issued in 2012, a drop of 40% and the eighth straight month of decline compared to the same month in 2012. The reduced number of installations appears to be continuing in 2014, and this stagnation will likely continue until the questions of interconnection availability and costs are adequately addressed.

The utility sites concerns about safety and reliability, and no one questions that safety and reliability is key. However, the issue here is that although the utility had ample notice that grid studies and upgrades were required in order to move forward with our clean energy goals and to support customer's interest in being part of the green energy infrastructure, the utility failed to adequately plan. The installation of PV in the utility's territories had doubled each year since 2008, starting with 471 systems installed through net energy metering in 2008, and growing to almost 40,000 systems today. Yet, the utility is only now conducting needed in the field analyses, the results of which may only produce more questions about grid stability.

In addition to the lost opportunities in reducing our dependence on imported fossil fuels by having more aggregate PV installed across the Hawaiian electric territories, the interconnection slow-down has also resulted in significant loss in tax revenue, both in the form of GET and income tax. Furthermore, the solar industry, which comprises approximately 26% of all of the construction income for the state, has slowed significantly, and this has resulted in the loss of hundreds of jobs—in a time when green energy jobs should be on the rise.

In addition to customers facing technical roadblocks, they also face financial uncertainty as they are now required to pay the prorated costs of upgrades, which the utility has yet to determine in most cases. On Maui, for instance, customers are now told that they will pay from \$600 to \$1,600/kW, which means a cost of \$3,000 to \$8,000 for upgrades, in addition to the cost of the system, plus a wait of 18 months, and 18 months of unanticipated electric bills, making the installation of solar financially out of reach for many. Customers on Oahu, who up until September 6th, 2013, did not pay for prorated upgrade costs if the system was under 10kW, are still waiting to find out how much the cost might be. They expect to hear sometime later this year, and customers on the Big Island face similar roadblocks. And these roadblocks are hitting middle class families struggling to make ends meet and pay the highest electric rates in the nation. A zip code analysis, for instance, for Oahu shows that many of the permits pulled for PV were in middle class neighborhoods.

The impact of inadequate preparation and study of the grid and the application of upgrade costs directly to the customer has hit the state in many ways. First, customers have been frustrated in their goal of installing solar, and even for those who can, they face potentially significant costs to pay for upgrades. A reduction of 40% in pulled permits means a reduction of about 40% in the installation of PV, and this under the deadline of the federal tax credit, due to expire in 2016. In addition, the reduced grid access stands to impact several programs recently adopted such as on-bill financing, on-bill repayment, and GEMS, which would have made available low cost funding for hard to reach customers like renters and low income ratepayers. Without grid access, these programs will go nowhere.

This means slower and stalled out progress in reaching our clean energy goals, a continued reliance on imported fossil fuels, lost opportunities for customers to take charge of their bills and invest in the state's infrastructure, a slowed economy, lost jobs, and reduced tax revenues. This also means that Hawaii will burn more fossil fuels than it needs to and pump more greenhouse gases into the atmosphere. An overall 20% reduction in installation of PV in 2013 adds up to an additional 57,897 barrels of oil that will be burned each year for the next 30 years, all of which would have been off-set by self-generation.

Everyone agrees that the issues of grid access and cost allocation are complex. But the discussion should have begun in earnest years ago. What technical upgrades are available, and how would they be implemented? What is the cost, and how should it be allocated? How can we best meet our clean energy goals, and beyond, while having a robust utility grid, and a variety of clean energy sources? Time is short, and now is the time to bring our grid up to "grid 2.0."

Thank you for the opportunity to testify

Leslie Cole-Brooks
Executive Director
Hawaii Solar Energy Association



HOUSE COMMITTEE ON CONSUMER PROTECTION & COMMERCE

February 10, 2014

RE: HB 1943 relating to the modernization of the Hawaii electric system

Chair McKelvey, Vice Chair Kawakami, and Members of the Committee:

The Alliance for Solar Choice (TASC) appreciates the opportunity to provide testimony in strong support of HB 1943.

TASC advocates for maintaining successful distributed solar energy policies and markets throughout the United States. Members of TASC represent the majority of the nation's rooftop solar market and include REC Solar, SolarCity, Solar Universe, Sungevity, Sunrun and Verengo Solar. These companies are responsible for over one hundred thousand residential, school, government and commercial solar installations across the country. Several TASC members are active in the Hawaii solar market, where collectively TASC members serve many thousand customers.

The rooftop solar market in Hawaii has been driven by the desire of citizens to assert control over their electric bill. TASC was formed on the belief that everyone should have the right to power their homes rooftop solar. This basic right – though strongly supported by Hawaii residents - is at risk because the utilities have not adapted their power grid or business model to cater to the needs of today's electricity consumers.

The utilities have suggested that the electric grid is "saturated" for rooftop solar, even though nine out of ten homes in Hawaii does not have solar. TASC believes that everyone – not just the first 10% - should have the option of investing in generating their own clean electricity at their home. TASC supports HB 1943 because it acknowledges that this type of consumer choice is in the public interest. Without pre-determining the outcome, HB 1943 calls on the Public Utilities Commission and the utilities to develop a plan for modernizing the electric grid to serve modern-day consumer needs.

Thank you for considering our comments on HB 1943. We appreciate your leadership on this important issue. If you have any questions, please contact Sarah Bertram, Hawaii Policy Chair for The Alliance for Solar Choice at sarahb@sunrun.com or 415-580-6856.

Sincerely,

Anne Smart
Executive Director

The Alliance for Solar Choice
595 Market St, 29th Floor, San Francisco, CA 94105
<http://allianceforsolarchoice.com>



TESTIMONY SUPPORTING HB 1943

To: Honorable Angus L. K. McKelvey Gabbard, Chair, House Committee on Consumer Protection and Commerce

From: SolarCity

Hearing on Feb. 10, 2014, at 2:45 p.m., Room 325

Aloha Chair McKelvey, Vice Chair Kawakami, and Members of the Committee:

Thank you for the opportunity to provide testimony supporting H.B. 1943, which initiates a process to modernize our electrical grid.

SolarCity serves homeowners, businesses, not-for-profit organizations, and government entities who want clean energy at a predictable cost. Our operations center in Mililani employs 100 local residents, and our customers and partners in Hawai'i include hundreds of local homeowners, the Hawai'i Department of Transportation, the Maui Arts & Cultural Center, KIUC, HECO, the Ulupono Initiative, the University of Hawai'i, and the U.S. Military.

In the last few years, thousands of Hawaii citizens have "gone solar," securing stable and predictable electricity costs. Yet, only one out of ten households have rooftop solar PV. Today, if you want to join your neighbors who have contributed to our state's effort to reduce consumption of foreign oil, you are in a race against others who want solar or maybe prevented from going solar altogether. Why? Because our investor owned utilities say the grid cannot safely accommodate more distributed generation.

Nine out of ten may be denied the opportunity to get rooftop solar because our 20th century grid has failed to keep up with 21st century innovation.

Without placing blame or speculating on the reason for this lack of foresight, it is clear that we need the support of our lawmakers to ensure that the issues regarding grid stability and distributed generation are considered through an objective process and decided on facts rather than fears and presumptions.

H.B. 1943 calls for the Public Utilities Commission to develop a grid modernization plan that will serve the public interest. Significantly, the bill does not predetermine a particular outcome. However, we believe that the public interest will best be served by giving citizens the ability to install rooftop solar regardless of where they live.

Thank you for the opportunity to testify in support of H.B. 1943.

Mahalo,

Jon Yoshimura
Director of Policy & Electricity Markets, SolarCity Hawaii



HOUSE COMMITTEE ON CONSUMER PROTECTION & COMMERCE

Monday, February 10, 2014

**TESTIMONY IN SUPPORT OF HB 1943 RELATING TO
THE MODERNIZATION OF THE HAWAII ELECTRIC SYSTEM**

Sarah Bertram, Director, Public Policy, Sunrun

Chair McKelvey, Vice Chair Kawakami, and Members of the Committee:

Thank you for the opportunity to provide testimony in strong support of HB 1943.

Sunrun is a leading residential solar company with a national reach. Sunrun has been serving customers in Hawaii since 2010 by partnering with local solar installers. To date, Sunrun has invested more than \$140M to support approximately 4,000 homeowners across the islands in adopting rooftop solar.

In the four years since Sunrun entered the market, we have observed two clear trends:

1. **The total amount of rooftop solar in Hawaii has roughly doubled each year.** As a result of growing consumer demand for home solar, approximately one in ten homes have solar today and many more homeowners want to install solar in the future.

Sunrun supports HB 1943 because it acknowledges that this increasing consumer desire to serve on-site electricity load with rooftop solar is in the public interest. Beyond allowing homeowners to take action to control their utility bills, rooftop solar advances Hawaii's environmental goals and supports thousands of local jobs.

A September 2013 poll conducted by Tulchin research (N=600) shows how consumer demand for rooftop solar shapes the public's policy views: ninety percent of respondents agreed with the statement (including 67% who *strongly* agree) that "we should allow and encourage as many people as we can to install solar power in their homes and businesses to advance the state's clean energy goals." The legislature in Hawaii has a clear history of supporting policies like HB 1943 that seek to achieve this objective.

2. **The number of customers experiencing considerable uncertainty and/or delays in adopting solar due to utility interconnection challenges has significantly increased.**

Although Hawaii has the highest overall level of rooftop solar per capita, nine out of ten homes do not have rooftop solar today. Further, the State is only a quarter of the way to achieving its renewable energy standard of 40% renewable energy by 2030.

The electric grid needs to adapt to serve the needs of modern-day consumers and support the State's renewable energy goals.

HB 1943 addresses this challenge by calling for a grid modernization planning process. Importantly, HB 1943 does not pre-determine the outcome of this process; it only calls for the Commission to develop a grid modernization plan that will support the public interest of maintaining customers' ability to interconnect rooftop solar systems in a timely manner and for a reasonable cost regardless of their location on the electric system.

Sunrun strongly supports this bill. Thank you for the opportunity to provide this testimony.

Sincerely,
Sarah Bertram

kawakami3-Benigno

From: mailinglist@capitol.hawaii.gov
Sent: Saturday, February 08, 2014 12:19 PM
To: CPCtestimony
Cc: mendezj@hawaii.edu
Subject: *Submitted testimony for HB1943 on Feb 10, 2014 14:45PM*

HB1943

Submitted on: 2/8/2014

Testimony for CPC on Feb 10, 2014 14:45PM in Conference Room 325

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

Comments:

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kawakami3-Benigno

From: mailinglist@capitol.hawaii.gov
Sent: Friday, February 07, 2014 8:56 PM
To: CPCtestimony
Cc: ndavlantes@aol.com
Subject: *Submitted testimony for HB1943 on Feb 10, 2014 14:45PM*

HB1943

Submitted on: 2/7/2014

Testimony for CPC on Feb 10, 2014 14:45PM in Conference Room 325

Submitted By	Organization	Testifier Position	Present at Hearing
Nancy Davlantes	Individual	Support	No

Comments:

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LATE

**TESTIMONY BEFORE THE HOUSE COMMITTEE ON
CONSUMER PROTECTION AND COMMERCE**

H.B. NO. 1943, H.D. 1

RELATING TO THE MODERNIZATION OF THE HAWAII ELECTRIC SYSTEM

February 10, 2014

2:45 pm

House Conference Room 325

Scott Seu

Vice President, Energy Resources and Operations
Hawaiian Electric Company, Inc.

Chair McKelvey, Vice Chair Kawakami, and Members of the Committees:

My name is Scott Seu and I represent Hawaiian Electric and its subsidiary utilities Maui Electric and Hawaii Electric Light.

We support the intent of HB 1943, HD 1, to open a Public Utilities Commission review of technical and economic issues associated with, but not limited to, customer-owned distributed generation. However, we cannot support this bill in its current form as the proposed statutory language requiring the PUC to “ensure” all customers’ interconnection at reasonable cost would have unintended consequences, harming our customers who do not install their own generating systems and limiting us from pursuing other sources of renewable energy that provide broader cost benefits to all customers.

The bill virtually assures that costs to interconnect customer-owned generators will have to be spread among all customers, not just those able to benefit from solar, as the bill requires the PUC to “ensure any eligible customer-generator, as defined in section 269-101, and not having more than the maximum capacity established for eligible customer-generators pursuant to section 269-101.5, can make a safe and reliable interconnection on the Hawaii electric system in a timely manner and for a just and reasonable cost regardless of where that eligible customer-generator is located on the Hawaii electric system.”

Actual costs of interconnection are highly dependent on the location, type, and size of a customer’s generation system and individual circuit. To guarantee that a customer-generator be able to connect at “reasonable” cost no matter where they are

on the grid means that those costs will need to be “shared” among all other customers. That would include those customers who do not self-generate, which generally will include renters and high-rise dwellers and anyone without the funds or credit rating to qualify to install rooftop solar. This change from the PUC’s “cost causation” principle could have far-reaching consequences beyond rooftop solar and should require a discussion amongst stakeholders and our regulatory body.

Actual costs of interconnection are highly dependent on the location, type, and size of a customer’s generation system and individual circuit. As an analogy, a home builder could say all two bedroom houses cost X and all three bedroom houses cost Y and all four bedroom houses Z. In reality, there are smaller and larger houses in each class and some have larger lots and others smaller lots, and some may have standard features and others may have upgraded features. As a result, the cost of a house is not just based on the number of rooms, but rather is priced based on the location, size and cost of the finishing (appliances and special features). In other words, the specific attributes contribute to the cost. Similar to the cost of interconnecting a customer-owned distributed generation to the electric grid, a number of factors, such as the size of the installation, the complexity of the installation and other specific attributes, contribute to the cost, which would determine the charge of the interconnection.

Under the PUC’s “cost causation” principle, the customer with the distributed generation should bear the cost that is required to interconnect such system to the grid. This principle assures fairness for all customers. The cost causation principle should be followed for interconnection fees rather than having set fees. To do otherwise would result in either some customers overpaying and others underpaying the cost of the interconnection, or would transfer costs to customers without customer sited generated systems.

The bill also assumes that there is no conceivable technical limit to connecting generation to a grid or circuit, and that it is merely a matter of grid modernization and a more robust process for interconnection applications. We continue to push forward, leading the nation in interconnecting distributed PV on our circuits and going far beyond industry norms. But at some point, there will be a practical limit whether driven by reliability and safety issues, or, in the case of an island-based electric

system, the total amount of electricity that is used by our customers. As written, the bill would set unrealistic – and perhaps unachievable – expectations for our customers and for the solar industry.

Finally, this bill adopts the premise that customer-owned distributed generation should be first and foremost among clean energy resources to serve the residents of our State. We agree that distributed generation is an important and integral piece of our energy portfolio. However, the majority of our customers are served by other types of renewable resources, such as wind farms, solar farms, H-Power, geothermal, biomass and biofuel plants, and eventually ocean energy. These other resources serve all customers, not just a subset, and when purchased at low prices can benefit all customers, while distributed generation serve only the few that can afford it, have appropriate circumstances, and are, in total, the largest and most expensive generators on our system. Distributed generation, as currently priced, lowers cost for the few and increases cost for the many.

Again, we support the intent of HD 1943, HD 1, to open a PUC review of customer generation. However, this proceeding should not be constrained by statutory language that would bind the Commission and set unrealistic expectations for our customers or the solar industry.

If the Committee chooses to move this bill forward, it should be amended to allow a review through a broader lens that considers the value of customer generation as part of a broader energy resource mix, with the intent to maximize benefits and minimize costs to all customers, not just those with PV. We respectfully ask that the Committee amend HD 1943, HD 1, as such.

Thank you for this opportunity to testify.

LATE



Directors

Jody Allione
Silver Ridge

Joe Boivin
Hawaii Gas

Kelly King
Pacific Biodiesel

Warren S. Bollmeier II
WSB-Hawaii

TESTIMONY OF WARREN BOLLMEIER ON BEHALF OF THE
HAWAII RENEWABLE ENERGY ALLIANCE BEFORE THE
HOUSE COMMITTEE ON CONSUMER PROTECTION AND COMMERCE

HB 1943 HD1, RELATING TO THE MODERNIZATION
OF THE HAWAII ELECTRIC SYSTEM

February 10, 2014

Chair McElvey, Vice-Chair Kawakami and members of the Committee, I am Warren Bollmeier, testifying on behalf of the Hawaii Renewable Energy Alliance (HREA). HREA is an industry-based, nonprofit corporation in Hawaii established in 1995. Our mission is to support, through education and advocacy, the use of renewables for a sustainable, energy-efficient, environmentally-friendly, economically- sound future for Hawaii. One of our goals is to support appropriate policy changes in state and local government, the Public Utilities Commission and the electric utilities to encourage increased use of renewables in Hawaii.

The purposes of HB 1943 HD1 are to: i) require the public utilities commission to adopt rules for improved accessibility to connect to the Hawaii electric system for any person, business, or entity on the Hawaii electric system; and (ii) require the commission to initiate a proceeding no later than July 1, 2014, to discuss upgrades to the Hawaii electric system for anticipated growth of customer generation.

HREA **strongly supports** this measure and offers the following comments and recommendations:

- 1) Comments. This measure supports our clean energy goals. In our opinion, we need to facilitate the installation and operation of customer-sited to the greatest extent possible if we are to meet our current RPS of 40% Specifically:
 - a) The intent of this measure is clear – every customer wishing to install and interconnect a renewable system should be able to do so. Clearly, this also supports the concept of “customer choice.” Granted there are technical challenges to be overcome, and they can be.
 - b) We support the role of the Public Utility Commission to open a docket on grid modernization. So, let’s roll up our sleeves and get with it!
- 2) Recommendations: We recommend the committees pass this measure out.

Mahalo for this opportunity to testify.



HOUSE COMMITTEE ON CONSUMER PROTECTION & COMMERCE

February 10, 2014, 2:45 P.M.
(*Testimony is 5 pages long*)

TESTIMONY IN SUPPORT OF HB 1943 HD1

Aloha Chair McKelvey and Members of the Committees:

The Sierra Club, Hawaii Chapter, with over 12,000 dues paying members and supporters statewide, ***strongly supports*** HB 1943. This measure prioritizes the development of a grid modernization plan so that residents have the right to choose clean, renewable energy.

I. Addressing Customer Need

Melba Amaral, a Faith Action for Community Equity volunteer, recently wrote a story for the Sierra Club's Hawaii Solar Voice's website.¹ She runs a small day care facility for toddlers. She has an electric bill of about \$400 a month. She's fairly good at minimizing her electricity usage. She unplugs her cable box every night. She uses a clothesline.

Her only "luxury" is a single window air conditioner that she uses to make sure her Kalihi house doesn't become too hot for her toddlers. Ms. Amaral could benefit tremendously from rooftop solar. She's doing all of the right things to reduce her electric bill, but no other relief is in sight. And yet, under the current situation, she's denied the opportunity to generate her own electricity and help the state out with its clean energy goals.

This measure would help protect Ms. Amaral's right to choose rooftop solar. As you consider this measure, please consider Ms. Amaral's plight and thousands of other residents that are in a similar situation. Hawaii's electrical rates are currently 2 to 3 times the national average. Average electrical rates have increased by 50% since 2009. Our electrical distribution system should be designed to service all customers, even those that may choose to generate their own electricity, and in a manner that results in a net cost savings for all ratepayers.

¹ <http://www.hawaiisolarvoices.org/1/post/2013/11/i-need-solar-on-my-roof-and-heco-off-my-back.html>

II. *The Need to Integrate More Rooftop Solar*

Hawai'i continues to be one of the most fossil fuel dependent states in the nation. Every year, the state imports approximately 45 million barrels of oil. This dependence results in the outflow of the State's financial resources and creates a tenuous reliance on an unsustainable and unstable resource.

Distributed solar is a shining success story in Hawai'i's efforts to adopt clean energy. As reported by DBEDT, solar energy provided 15% of Hawai'i's renewable energy generation in 2012 and 26% of all construction expenditures.² That bears repeating. 26% of all construction expenditures or approximately a quarter of all construction jobs created in Hawaii came out of the solar industry. Failing to allow customers to choose rooftop solar puts this growth in serious jeopardy.

Even HECO acknowledges we need to achieve "uniform, timely, and unfettered access for all customers to interconnect on a given circuit."³

III. *Benefits of a Modern, Efficient Grid*

The benefits of transforming from a 19th century oil-based grid, to a modern, efficient grid are numerous. Consider:

- **Reliability and consistency.** Improved power quality resulting in economic and productivity gains.
- **Efficiency.** Effective asset utilization and resource management.
- **Flexibility.** Enables new load management, distributed generation, and demand-response options.
- **Environmentally friendly.** Directly increases the amount of renewable energy and energy efficiency options available, and allows a drastic reduction in fossil fuel consumption.

IV. *PUC Has Discretion to Address Broader Technical and Economic Issues*

Importantly, this measure does not pre-determine how solar can or should interconnect. It expressly ensures that the PUC has control over reliability and safety issues and allocates resources so that the PUC can develop a grid modernization plan that supports the public interest of allowing customers to interconnect rooftop solar in a timely and reasonable manner.

² http://energy.hawaii.gov/wp-content/uploads/2011/10/FF_June2013_R2.pdf

³ 2013 Integrated Resources Planning Report, June 28, 2013, page ES-6. Available online at: http://www.hawaiianelectric.com/vcmcontent/IntegratedResource/IRP/PDF/IRP_2013_Report-Executive-Summary-Transmittal-Letter.pdf

V. Response to Concerns Raised by the PUC/HECO:

A. Concern regarding agency oversight/permitting.

The PUC's question appears to be whether "the statute requires the commission to ensure customers can obtain their city and county permits in time." The statute doesn't do this for two reasons.

- i. *The statute limits the Commission's responsibility to ensure a timely interconnection to actions it can take within its interconnection procedures.*

It states: "The procedures established by the commission by rule or order pursuant to subsection (a) shall be revised as necessary to ensure . . . (a timely interconnection)."

The interconnection procedures only apply to jurisdictional utilities, meaning the Commission cannot somehow revise its interconnection procedures in a way that would improve city and county permitting timelines.

- ii. *The statute balances the Commission's responsibility to ensure a timely interconnection with the concern that those interconnections be safe and reliable:*

The procedures established by the commission by rule or order pursuant to subsection (a) shall be revised as necessary to ensure any person, business, or entity can make a safe and reliable interconnection. . . ."

Thus, the statute does not somehow require the Commission to find ways to work around city and county permitting delays because such workarounds could result in unsafe interconnections.

B. Concern that disputes over "reasonable interconnection costs" could get escalated to courts for resolution.

Any such disputes would be between HECO and the customer and would follow procedures outlined both in statute and in the interconnection procedures that allow for resolution at the PUC. The section, Haw. Rev. Stat. § 269-145(c), states:

The commission shall have the authority to make final determinations regarding any dispute between any user, owner, or operator of the Hawaii electric system, or any other person, business, or entity connecting to the Hawaii electric system,

concerning either an existing interconnection on the Hawaii electric system or an interconnection to the Hawaii electric system created under the processes established by the commission under this section.

(emphasis added).

In addition, the interconnection procedures themselves (Rule 14H, Appendix III, Sections 6(b)-(c)) already have dispute resolution procedures (quoted below). A stakeholder proceeding that creates a framework of cost-sharing that "just and reasonable cost" would give the PUC the same deferential privilege it enjoys with any of the decisions and orders it makes.

(b) If there is a dispute as to the need for interconnection equipment, protective devices or control systems, then the Company generally would use the following procedures: (1) the Company's Contact Person would inform the Customer of the reasons for the interconnection equipment/protective devices/control systems; (2) if the Customer disagrees with the conclusion, then the Customer would meet with representatives from the Company to discuss the matter; (3) additional analyses may be conducted by the Company at the request of a Customer that questions the need for particular the analyses; (4) if the Customer continues to disagree with the conclusion, then the Customer would write to the Company's Contact Person explaining the position of the Customer, and the Company's Contact Person would respond in writing within fifteen (15) business days² (so that any dispute is reduced to writing); (5) if the parties continue to have a dispute, then authorized representatives from the Company and Customer (having full authority to settle the dispute), would meet in Hawaii (or by telephone conference) with the meeting to be scheduled within fifteen (15) business days of a written request and attempt in good faith to resolve the dispute; and (6) if the parties continue to have a dispute, then the parties may engage in a form of alternative dispute resolution agreeable to both parties, or a party may request that the Commission resolve the matter by filing a written request with the Commission attaching the relevant information and correspondence, and serving the request on the other party and the Division of Consumer Advocacy of the Department of Commerce and Consumer Affairs of the State of Hawaii.

(c) Customers are not required to exhaust the Company's dispute resolution procedures set forth above before proceeding under provisions applicable to informal or formal complaints or other provisions contained under the Rules of Practice and Procedure before the Public Utilities Commission, currently codified in Title 6, Chapter 61, Subchapter 5 of the Hawaii Administrative Rules, or any other applicable statutes, orders, rules, or regulations. If any such proceeding is initiated, the Customer shall notify the Company's Contact Person in writing that it does not desire to continue the Company's dispute resolution procedures.

C. The PUC points out that this bill criticizes strict cost causation, but doesn't provide an alternative.

This bill was deliberately written to avoid being overly prescriptive for the PUC – we are trying to honor the role that the legislature should play in providing general policy direction. That said, we don't object if the PUC wants more direction. In this vein, we suggest the right place to draw from is the PV subgroup report from the RSWG. This report was supported by HECO, the consumer advocate, and the solar industry. In the report, there is a specific discussion about this issue. We have a suggested redline if this a direction desired by this Committee.

D. HECO is concerned the bill implies that there is no technical limitation to how much rooftop solar can be interconnected.

We read this bill as clearly articulating that the ability of residents and businesses to interconnect rooftop solar in a timely manner and for a reasonable cost in the public interest *provided it does not compromise safety and reliability*. We are happy to make the recognition of safety and reliability more explicit and have an idea of where we can do that in the bill language.

We think HECO's concern underscores the importance of this bill and of doing the detailed work to develop a plan that allows customer-generators to interconnect for a reasonable cost in a timely manner. This issue isn't going to get less complicated in the future. The fact that it is going to be hard work doesn't mean we shouldn't do it. It's all the more reason that we need a plan, and an ongoing discussion as technology changes/improves.

E. The PUC is concerned that there are other important customer choice options that the PUC supports that are not addressed by this bill.

Not addressing these in this legislation doesn't that they aren't important and can't be addressed in existing regulatory processes like rate cases and the IRP process. If the PUC has specific language that it would like to recommend to acknowledge other customer choice options and their importance, we are very open to considering those ideas.

F. The PUC is concerned that there could be an unintended consequence by continuing to maintain customer's ability to invest in and interconnect rooftop solar because of concerns the PUC has with net metering.

See the above referenced-point. Just because it's not in the bill, doesn't mean it can't be addressed. Based on legal research, it appears that NEM must be addressed in a rate case. Addressing it outside of a general rate case would likely be construed as being single-issue ratemaking. We note that HECO has a rate case this year and we support NEM being addressed in that process.

Mahalo for the opportunity to testify.



LATE

HOUSE COMMITTEE ON CONSUMER PROTECTION & COMMERCE

February 10, 2014, 2:45 P.M.

Room 325

(Testimony is 2 pages long)

TESTIMONY IN SUPPORT HB 1943 HD1

Aloha Chair McKelvey and Consumer Protection & Commerce Committee members:

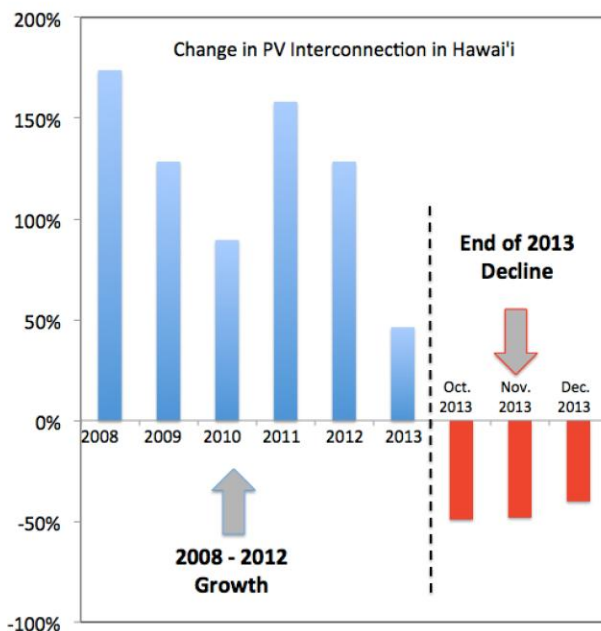
Blue Planet Foundation strongly supports a robust electrical grid that can connect clean and affordable energy to Hawai'i's citizens and ratepayers. House Bill 1943 HD1 will help to ensure that everyone can have access to such a grid, in a timely and reasonable manner. The bill directs the Public Utilities Commission (i) to open a proceeding by July 1, 2014 to address whether there are technical and economic barriers to allowing more residential and commercial customers to interconnect to the grid with clean energy, and (ii) to consider whether the establishment of differentiated rates of return for the utility are warranted to encourage the grid upgrades that are needed to allow equal access to the grid, and to discourage investments in the aging grid infrastructure that blocks access to the grid.

1. Modern Grid Interconnection is Urgently Needed.

This solution cannot wait. At the end of 2013, Hawaii saw a sharp drop in the growth of solar interconnection:

- In October 2013, 1187 fewer ratepayers were issued solar building permits compared to October 2012, a drop of 49%.
- In November 2013, 956 fewer ratepayers interconnected, a drop of 48%.
- In December 2013, 785 fewer ratepayers interconnected, a drop of 41%.

This worrisome stagnation illustrates a sharp change in direction for Hawai'i. Previously, solar installations were essentially doubling each year – an exponential trend that could drive Hawai'i's clean energy transformation. That growth boosted the economy, it created jobs, and it promoted the use of clean energy



% growth in number of PV installations for HECO, MECO, and HELCO grids, compared to previous year, and % decline compared to same month in the previous year for HECO grid. Data from HECO NEM reports and recent news reports.

that does not rely on imported fossil fuels. The current stagnation, if left unaddressed, will do the opposite. Solar stagnation is already resulting in local layoffs. It will robbing Hawai'i of potential energy savings. It will prolong our dependence on dirty fossil fuels.

House Bill 1943 HD1 can help to make sure that this grid modernization issue is resolved sooner, rather than later.

2. HB 1943 HD1 Can Help Ensure Equality for All Ratepayers.

House Bill 1943 HD1 can also help ensure that all ratepayers are treated with equal access to clean energy. It is no longer true that solar energy is limited to wealthy neighborhoods. By 2012, the introduction of innovative financing made solar increasingly accessible to all Hawaii ratepayers. For example, in 2012 the fastest growing PV neighborhoods were Wai'anae, Hau'ula, Waimanalo, La'ie, and Waialua.

If the growth of rooftop solar is allowed to stagnate, it means that these growing PV neighborhoods will be unequally and unfairly blocked from clean affordable energy. Moreover, some parties are arguing that new solar customers – presumably in these fast growing lower- and middle-income PV neighborhoods – should be singled out to pay the cost of upgrading the grid to make it work with distributed clean energy. Many ratepayers are already in a holding pattern, under the fear that interconnection will cost thousands of dollars and will take many months. This situation, if allowed to remain, is grossly unfair. As the utility evolves into its 21st century business model, all ratepayers need a grid that is upgraded so that it can flexibly accommodate more clean affordable energy. The cost of a 21st century grid should *not* be unfairly apportioned to those customers who are least able to afford it, and who are most in need of the rate relief that can be provided by clean energy sources such as solar.

House Bill 1943 HD1 directs the PUC to revise interconnection procedures to ensure that all ratepayers can interconnect to the grid in a timely manner, for a reasonable cost.

3. HB 1943 HD1 Can Help Avoid a Costly and Inefficient Fight for Ratepayers.

Recently in Arizona, a highly public fight between the local utility and solar advocates resulted in millions of dollars wasted on publicity campaigns. After review of the facts, the Arizona PUC found that the cost of solar interconnection could be fairly apportioned by charging a small fee to solar customers based on the size of each solar system. Ultimately, this fee will cost solar households in Arizona roughly \$5 per month, to cover the fixed costs of the utility. In comparison, the Arizona utility argued that solar households should pay a grossly higher fee – \$50 per month. Hawai'i's ratepayers don't deserve this type of wasteful fight.

House Bill 1943 HD1 directs the PUC to examine how our utility's rate of return can be structured in way that will align the interests of the utility and the interests of ratepayers, by incentivizing a modern grid that makes clean energy accessible for all ratepayers, rather than incentivizing investments in the expensive and aging fossil fuel-fired grid, which blocks ratepayers from grid interconnection.

Thank you for the opportunity to testify in support of this timely and important solution.

LATE

HOUSE COMMITTEE ON CONSUMER PROTECTION AND COMMERCE
Monday, February 10, 2014 — 2:45 p.m. — Room 325

Testimony in Support HB 1943, HD1

Chair McKelvey, Vice Chair Kawakami, and Members of the Committee:

Thank you for the opportunity to provide testimony in support of HB 1943, HD1. RevoluSun is a locally-owned solar company that has sold and installed more than 3,500 residential photovoltaic solar systems in Hawaii. Every day, RevoluSun meets with dozens of Hawaii residents who are interested in helping Hawaii lower its dependence on fossil fuels by purchasing or leasing a solar energy system.

The public's demand for solar in Hawaii is extraordinarily strong. This is largely because Hawaii continues to have electricity rates that are more than 3 times the national average. Along with energy conservation, "going solar" is the only way for Hawaii residents to get some relief from their sky-high electric bills. It also allows Hawaii residents to participate in Hawaii's clean energy goals and help reduce the state's dependence on imported fossil fuels.

Unfortunately, many homeowners are now being prevented from installing photovoltaic solar systems as a result of Hawaiian Electric's interconnection policies. These interconnection policies are in turn the result of aging utility infrastructure designed to support fossil-fuel generation rather than renewable energy.

HB 1943 will help solve this problem by initiating a grid modernization planning process. With a more modern grid, Hawaiian Electric will be able to deliver more stable power, with a higher renewable content to its customers, while at the same time allowing more Hawaii residents to install photovoltaic solar systems. Grid modernization will also allow solar installations to proceed more quickly and without requiring homeowners to pay for elaborate studies or costly grid upgrades.

For these reasons, we **strongly support** HB 1943, HD1 and urge you to pass it. Thank you for the opportunity to provide this testimony.

Sincerely,

Colin Yost
Principal & General Counsel

LATE



HOUSE COMMITTEE ON CONSUMER PROTECTION AND COMMERCE

Monday, February 10, 2014 - 2:45p.m. Room 325

Testimony in Support HB 1943, HD1 (Testimony is 2 pages long)

Chair McKelvey, Vice Chair Kawakami, and Members of the Committee:

I am the Owner of Rising Sun Solar a Maui based a locally owned solar company that has been installing PV systems on Maui and statewide for over 10 years. We have grown from a home based business to a company with over 10,000 square feet of office and warehouse space and over 75 full time employees. Rising Sun installed the 7th grid tied PV system on Maui in 2003 and we have seen the market grow. Below in my testimony is a brief summary of how since 2003 solar has continually been bumping up against would-be caps and "limits" on the amount of PV that can be interconnected to Hawaii's utility grids. In every single case to date these limits have been surpassed without negative consequences to utility customers. The opposition of The Grid Modernization Bill on the basis that it provides a continued path to interconnection is not substantiated by facts and ignores the provisions in the measure that address both cost and reliability concerns. The arguments against grid modernization and solar access are no more than an argument to unnecessarily limit solar access and customer choice and perpetuate HECO's 'boy that cried wolf' spirit that has prevailed for over a decade.

The Net Energy Metering Law (NEM) was passed in 2001 and for the first 4-5 years we needed to raise customer awareness. PV was more of a dream and a hobby than a meaningful part of Hawaii's Energy Future and a thriving solar market. To help raise awareness and promote the market I co-founded the Hawaii PV Coalition in 2003. As the industry grew and electricity costs more than doubled from 16¢/kWh to @38¢/kWh the solar industry and PV customers have been faced with caps and limits, costly studies and delays, and each year these have proven to be false limits based on conservative or false assumptions. By 2007 Solar in Hawaii had established itself as a proven technology, the new challenge has been to create regulation that would allow customers to interconnect their NEM solar systems.

In February 2010 Hawaiian Electric asked the State Public Utilities Commission to agree to a moratorium on Maui, Molokai, Lana'i, and Big Island because PV penetration was reaching the 'threatening' level of 5 percent of peak load. Although this level seems almost comically low compared to where we are now, the proposed moratorium very nearly became reality. The solar industry and many others voiced strong opposition and HECO retracted their request and the PUC opened the Rule 14H docket 2010 and formed the Reliability Standards Working Group (RSWG) 2011. Since 2011 the number of PV systems on the grid has more than tripled with no reports of compromised reliability due to distributed PV systems.

I have been an active in the regulatory proceedings including the Rule 14H Docket and Reliability Standards Working Group RSWG. I was the chair of the PV subgroup for RSWG, which was formed by the Independent Facilitator during the middle of the docket at the PUC's

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request. The PV subgroup was comprised principally of representatives of the solar industry and Hawaiian Electric. Initially the RSWG was not very focused on distributed generation and our group had a limited scope until The PUC Commission's May 4th 2012 Order that "*The RSWG should craft recommendations on new, streamlined interconnection screening processes for DG for the HECO Companies.*" The Commission asked the RSWG to consider California Rule 21 Tariff (adopted on 9/13/12), NREL paper on updating interconnection screens for PV integration, and KIUC interconnection procedures. At the same time the PUC read RSWG working group members the riot act; ordered members that were slowing down the process needed to get out of the way and the PUC stressed that 12/31/2012 was a firm date to complete all work. It was clear that the work of the RSWG was urgent and our PV group delivered substantive, actionable, and needed changes to the interconnection rules as well as a proactive approach for DG planning.

The RSWG **unanimously** approved all PV subgroup recommendations on December 3rd 2012. And most of its members including HECO, DBEDT, the Solar Parties and others all stressed in their closing comments that the PUC act quickly on the PV group's report and open a new 14H docket to implement its recommendations. Now for over one year later the PUC has failed to act. HECO to their credit has adopted many of the PV subgroup recommendations, but these changes do not provide a long-term solution for PV customers in Hawaii.

The public's demand and support for solar in Hawaii is almost unanimous. A recent independent study showed support for solar energy in Hawaii approaching 100 percent. You can't get as many people to agree that they like ice cream or the beach as there is consensus that solar makes sense for Hawaii. And yet thousands of customers are being told to wait or that they can't interconnect their systems.

HB 1943 will help solve this problem by initiating a grid modernization planning process and compelling the PUC to initiate a docket and continue where RSWG left off. With a more modern grid, Hawaiian Electric will be able to deliver more stable power, with a higher renewable content to its customers, while at the same time allowing more Hawaii residents to install photovoltaic solar systems. Grid modernization will also allow solar installations to proceed more quickly and without requiring homeowners to pay for elaborate studies or costly grid upgrades.

All this is not to say that we haven't achieved a great feat in renewable energy integration! Hawaii is a leader in the country and worldwide and HB 1943 is the next necessary step to continue to lead as well as meet the Hawaii's energy goals while maintaining safety and reliability.

We strongly support HB 1943 and urge you to pass it as drafted. Thank you for the opportunity to provide this testimony.

Sincerely,

Bradley Albert

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My name is Cynthia Cantero and I live in Ewa Beach. I would like to be able to look you in the eye and tell you my story. Unfortunately, I'm battling serious illness and the medication makes it difficult for me to remember words a lot of the time, so I'm going to read from my notes.

The bill is about protecting customers

LATE

I'm testifying in ^{HB-1943} support of this bill because I'm a casualty of HECO's anti-solar policies. This bill is about protecting customer choice, but it's also about just protecting customers, period.

My family is under pressure, solar promised stability

When I first looked into installing solar in June of last year, I had no reason to think it would be a difficult process. The reason I decided to go solar was because of the pressures my family is under. I have five kids and I've been battling sarcoma since 1998. We live on a single income and our electric bill is through the roof. I wanted to give them some stability because I don't want them to lose the house when I'm gone. Solar promised us that stability.

The rug was pulled out from under us. Why didn't HECO prepare?

I took out a loan and I signed the contract in August. HECO came out, switched our meter and told us we were ok to move ahead. Two or three weeks later I was told we couldn't install because the grid couldn't handle any more solar. I thought, there's no way that happened in two or three weeks. Why weren't they preparing for this years ago?

The consequences this had on our family

Now, I have a loan payment of \$480, plus I'm still paying my electric bill. The one thing that makes me really mad is that the only thing I could guarantee my kids is the opportunity to get an education. Now, my son has to drop a class to take more hours at work to help keep our family afloat. That's just a drop in the bucket of the impacts that this has had on my family. I'm scheduled to go on a new treatment, but I can't do it while I'm under stress. The longer this ordeal goes on, the less chance I have of beating this cancer.

I don't trust that HECO has a plan

HECO says they have a plan, they say "We don't need oversight, trust us." But they've given me no reason to trust them. I don't trust that they're looking out for my best interest. I don't trust that they have a plan to fix the grid.

HECO & the PUC failed us. It's the legislators job to step in and protect us

I'm just one person, but it's important for you to understand that your policies have real impacts on peoples lives. We guarantee a monopoly to our utilities so that things like this don't happen. We've put in place a commission to oversee the utility so that things like this don't happen. Both of those systems have fallen through, and now it's up to the legislature to step in and protect people like me.

God Bless each one of you for allowing me the opportunity to ~~share~~ say my piece

LATE

TESTIMONY OF HERMINA MORITA
CHAIR, PUBLIC UTILITIES COMMISSION
DEPARTMENT OF BUDGET AND FINANCE
STATE OF HAWAII
TO THE
HOUSE COMMITTEE ON
CONSUMER PROTECTION & COMMERCE

FEBRUARY 10, 2014
2:45 p.m.

MEASURE: H.B. No. 1943, H.D. 1

TITLE: Relating to the Modernization of the Hawaii Electric System

Chair McKelvey and Members of the Committee:

DESCRIPTION:

This measure proposes to amend Section 269-145, Hawaii Revised Statutes ("HRS"), by requiring the Public Utilities Commission ("Commission") to take steps to "ensure any eligible customer-generator, as defined in [HRS] section 269-101, and not having more than the maximum capacity established for eligible customer-generators pursuant to [HRS] section 269-101.5, can make a safe and reliable interconnection on the Hawaii electric system in a timely manner and for a reasonable cost" no matter where that eligible customer-generator is located on the Hawaii electric system, as defined under HRS § 269-141 ("Hawaii Electric System"). Similarly, HRS § 269-145.5 would be amended to require the Commission to "ensure that any eligible customer-generator, as defined in [HRS] section 269-101, and not having more than the maximum capacity established for eligible customer-generators pursuant to [HRS] section 269-101.5 can operate customer generation" without respect to where the eligible customer-generator is located on the Hawaii Electric System. The Commission is also required to commence a regulatory proceeding to consider how different grid modernization and planning actions by Hawaii's utilities "can accommodate anticipated growth in customer generation," in addition to considering the appropriateness, as well as the specific details, of a system of differentiated authorized rates of return on common equity to encourage utility infrastructure investments. Further, the Commission must report its findings and recommendations from the mandated regulatory proceeding prior to the 2016 legislative session. Finally, a general fund appropriation for fiscal year 2014-2015 of an unspecified amount is provided for the regulatory proceeding.

LATE

H.B. No. 1943, H.D. 1
Page 2

POSITION:

The Commission has serious concerns with the current measure and would like to offer the following comments for the Committee's consideration.

COMMENTS:

While the Commission appreciates the amendments made by the House Committee on Energy & Environmental Protection ("EEP Committee"), many of the Commission's underlying concerns expressed in its testimony on the original H.B. No. 1943 still remain with respect to this latest House Draft 1 version. Again, while this measure's title indicates an intention to address the grid modernization of Hawaii's electrical system, the Commission is concerned that this latest legislation, as written, remains solely focused on interconnection issues related to customer-sited generation by creating a statutory right to interconnect distributed generation facilities, which may be to the detriment of the rest of the electric system and at the expense of the ratepayers who may not have the ability to site these types of systems on their homes or businesses. The Commission strongly supports the development of a modernized grid, but the ability to interconnect customer-sited generation and increased customer energy options is the result of a robust, well-functioning grid, not the means to achieve a modernized electric system.

The Commission recognizes the frustration that has been caused by the Hawaiian Electric Companies'¹ inability to review and accommodate net energy metering applications in a timely manner due to the exponential growth of customer-sited installations. The Commission asks that the Legislature provide guidance to the Commission to institute an investigation looking at the technical and process issues, as well as the larger economic and policy issues, associated with modernizing the grid and offering increased customer energy options (e.g., demand response, increased energy efficiency, community-based renewable energy programs, etc.) in a rapidly changing environment.

¹The Hawaiian Electric Companies include Hawaiian Electric Company, Inc., Maui Electric Company, Ltd., and Hawaii Electric Light Company, Inc.

Progress in Stakeholder Discussions

To resolve many of the central issues associated with this measure and its Senate companion, S.B. No. 2656, various stakeholders – including the Commission – have been working together at the urging of the Senate to find mutually-beneficial solutions to the challenges underlying this legislation. The Commission is encouraged that these positive discussions will soon result in reformed legislation that will create a process to address the critical issues of modernizing Hawaii’s electricity grids in a way that is agreeable to the different interested stakeholders. Attached for this Committee’s consideration is the Commission’s suggested revisions to the current legislation on grid modernization (applicable to both H.B. No. 1943, H.D. 1 and S.B. No. 2656), as well as a version further revised in the course of stakeholder discussions.

While the Commission remains very hopeful that the various stakeholders in this discussion will come to agreement on the necessary processes and associated revisions to this legislation, it is important that the Commission reiterate its lingering concerns with the current H.B. No. 1943, H.D. 1.

Specific Concerns

The Commission has strong concerns with the provisions of H.B. No. 1943, H.D. 1 that create a right to interconnect to the grid, and, in particular, those statutory additions that:

- “[E]nsure any eligible customer-generator, as defined in [HRS] section 269-101, and not having more than the maximum capacity established for eligible customer-generators pursuant to [HRS] section 269-101.5, can make a safe and reliable interconnection on the Hawaii electric system in a timely manner and for a just and reasonable cost” regardless of where that eligible customer-generator is located [page 6, line 7 to line 16]; and
- “[E]nsure that any eligible customer-generator, as defined in [HRS] section 269-101, and not having more than the maximum capacity established for eligible customer-generators pursuant to [HRS] section 269-101.5, can operate customer generation regardless” of the site of generation [page 7, lines 13 to line 18].

There are a number of potentially unintended consequences that could occur as a result of creating such a right in statute. The Commission appreciates the amendments made by the EEP Committee to try to narrow the scope of application of this measure in order 1) to avoid inequitable cost allocation/shifts from single eligible customer-generators to all non-benefitting ratepayers,² and 2) to link the right to make an interconnection and to operate customer generation systems to only eligible customer-generators, as defined under HRS § 269-101, Hawaii's Net Energy Metering Law. However, the Commission does not believe that these amendments will accomplish what the Legislature appears to have intended. First, amending the requirement that interested parties may make an interconnection for "a reasonable cost" to "a *just and* reasonable cost" (emphasis added) and noting a desire in the H.B. No. 1943 committee report to not have inequitable cost allocations/shifts resulting from single-ratepayer infrastructure upgrades does not sufficiently address the potential ambiguity that this requirement creates, particularly since Section 1 of this measure continues to identify the application of cost causation principles as a "barrier to Hawaii residents' ability to install customer generation." Does the Legislature view the standard regulatory principle of cost causation as something that must be eliminated to allow for individuals to install customer generation, as the current bill's purpose section indicates, or does the Legislature wish to maintain the application of cost causation principles in the interest of fairness to all ratepayers, as the report from the EEP Committee specifically indicates? These kinds of conflicting directives from the Legislature on this fundamental point would make implementation of a statutory right to interconnect virtually impossible. Simply changing "a reasonable cost" to "a *just and* reasonable cost" does not appear to provide the necessary clarity as to the Legislature's intentions on this point.

Second, H.B. No. 1943, H.D. 1 would ensure both a right to interconnect to the Hawaii Electric System and a right to operate customer generation for "any eligible customer-generator, as defined in [HRS] section 269-101, and not having more than the maximum capacity established for eligible customer-generators pursuant to [HRS]

² See House Standing Committee Report No. 211-14, Re: H.B. No. 1943, H.D. 1, House Committee on Energy & Environmental Protection, February 6, 2014.

section 269-101.5.”³ The Commission appreciates the EEP Committee’s attempt to apparently narrow the scope of application of the proposed right to interconnect systems in Hawaii, but the practical effect of these changes throughout the measure will likely not avert any of the potential unintended consequences – particularly on the technical side – that would result from the creation of a statutory right to interconnect. Therefore, H.B. No. 1943, H.D. 1’s amendments will likely not adequately address many of the technical, as well as other economic and policy, concerns caused by this legislation that were raised by the Commission and various other stakeholders.

Additional specific concerns which remain include:

- This measure and the Commission proceeding it requires should encompass all necessary issues related to modernizing the Hawaii Electric System in a safe, reliable, and cost-effective manner. Grid modernization should consider – in addition to the safe and timely interconnection of distributed generation resources – modernizing the grid in a way that can help the State develop a diverse portfolio of cost-effective renewable energy resources that will benefit all electricity ratepayers, as well as a whole host of other customer energy options that include demand response, time-of-use rates and energy efficiency to help manage customers’ energy costs. Any grid modernization analyses should also consider appropriate rate structures that can be used to fairly allocate costs and benefits.

The Commission notes two recent analyses that further indicate the need to address cost and rate structures while addressing the technical and process issues associated with interconnection. A recent cost-benefit analysis of Hawaii’s renewable energy procurement methods conducted on behalf of the Commission indicates the benefits from customer-sited generation range from 22 cents/kWh to 29 cents/kWh (figures noted depend on island and customer

³ It should be noted that HRS § 269-101.5, as referenced in H.B. No. 1943, H.D. 1, deals with *maximum individual* system size limits for net energy metering participants, but is not in reference to the *maximum overall grid* limits for net energy metering.

rate class), while compensation at the retail rate under NEM ranges from 32 cents/kWh to 53 cents/kWh.⁴ The net result is an overall cost to ratepayers under the existing tariff structure. In a separate analysis, the Hawaiian Electric Companies estimate that the NEM Program will result in a lost contribution to fixed costs of more than \$38 million in 2014, costs which must be recovered from other ratepayers.⁵ This suggests that as the level of customer-sited generation continues to grow rapidly, issues of utility tariffs and rate structures must be evaluated in conjunction with customer access and grid modernization to ensure fair and equitable outcomes for all ratepayers, including those without the ability to generate their own electricity.

- Oversight of technical and economic issues that directly affect electric utility system operations are within the purview of the Commission. The Legislature has already provided guidance to the Commission on these issues with Act 166, Session Laws of Hawaii 2012 (authorizing Commission development, adoption, and enforcement of electric system reliability standards and associated rules), and Act 37, Session Laws of Hawaii 2013 (guiding the Commission “to induce and accelerate electric utilities’ cost reduction efforts, *encourage greater utilization of renewable energy*, accelerate the retirement of utility fossil generation, and *increase investments to modernize the State’s electrical grids.*”).
- The potential remains for conflicting agency oversight with respect to ensuring a right to interconnect and to operate customer generation systems. It remains unclear whether the Commission would be given influence or authority for overseeing regulatory areas (e.g., permitting, siting, and/or environmental

⁴A copy of this report can be found on the Commission’s website at: <http://puc.hawaii.gov/reports/energy-reports/>.

⁵The Hawaiian Electric Companies include Hawaiian Electric Company, Inc., Maui Electric Company, Ltd., and Hawaii Electric Light Company, Inc. See Net Energy Metering Status Report, December 31, 2013, Hawaiian Electric Company, Inc., Hawaii Electric Light Company, Inc., and Maui Electric Company, Ltd., filed January 31, 2014. This report can be found on the Commission’s website at: <http://puc.hawaii.gov/reports/energy-reports/>.

concerns and responsibilities) that are appropriately handled by other governmental entities. The practical effects of making the Commission responsible for ensuring grid interconnections and customer generation operations are not clearly explained in this measure.

Again, the Commission supports the development of a modernized grid, which can help accommodate more renewable energy, including distributed generation resources, and the Commission will continue to make this an essential part of its long-term strategy. Thus, the Commission supports receiving legislative guidance and would be open to conducting a proceeding similar to the one described in the attached proposed legislation that addresses issues appropriately identified by the Legislature.

Thank you for the opportunity to testify on this measure.

H.B. NO. 1943, H.D.1
[PUC Proposed Revisions]

A BILL FOR AN ACT

RELATING TO THE MODERNIZATION OF THE HAWAII ELECTRIC SYSTEM.

BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF HAWAII:

1 SECTION 1. The legislature finds that a modern electrical
2 grid is essential to meeting Hawaii's clean energy goals. In
3 recent years, Hawaii's electric utilities have integrated
4 significant levels of new renewable energy projects on each
5 island grid, and distributed generation in the form of rooftop
6 photovoltaic systems has been the fastest growing share of new
7 renewable energy generation each year. To date, Hawaii's
8 electric utilities are on track to exceed the next renewable
9 portfolio standard goal in 2015. However, moving beyond the
10 current levels of renewable energy on each grid will likely
11 require further investment in advanced grid modernization
12 technology to meet the State's aggressive clean energy goals and
13 maintain a reliable electricity grid.

14 The legislature believes further investments in advanced
15 grid modernization technology may be needed because Hawaii's
16 island grids are reaching significant levels of variable
17 renewable energy that can affect the overall operation of the

H.B. NO. 1943, H.D. 1

[PUC Proposed Revisions]

1 grid at the system level and the provision of safe and reliable
2 service at the point of delivery to customers. Continued growth
3 in renewable energy, particularly distributed generation, will
4 require investment to modernize the grid to interconnect high
5 levels of distributed generation and support other new customer
6 energy options, such as electric vehicles and demand response
7 technologies.

8 The legislature also finds that the rapid growth of the
9 State's solar industry has reduced Hawaii's dependence on
10 imported oil, created thousands of jobs during a statewide
11 economic downturn, and provided thousands of households and
12 businesses new options to manage their energy bills. The
13 legislature believes a long-term, sustainable solar industry is
14 in the State's interest.

15 The legislature additionally finds that as distributed
16 generation plays an increasingly significant role in the State's
17 clean energy transition the utilities' processes for
18 interconnection and distribution system planning will need to
19 evolve to become more transparent and timely to allow
20 electricity customers to exercise their options to manage energy
21 use. In addition, new rules and tariffs are needed for
22 distributed generation. The current state policies, incentives,

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1 rules and tariffs for distributed generation were developed to
2 support a nascent and emerging solar industry. Now that this
3 energy source and industry have achieved significant growth,
4 tariffs for distributed generation need to emerge where
5 customers pay for grid services provided to them and are
6 compensated for the valuable services provided to the grid by
7 distributed generation. These modified tariffs will also set
8 the stage for further technological innovation in this sector as
9 advanced information, PV inverters, and energy storage systems
10 will expand the nature of services offered by customer-sited
11 resources to the grid.

12 The legislature also finds that the resolution of the
13 matters noted in this measure require detailed discussion of
14 technical, policy, and economic issues associated with the
15 modernization of Hawaii's island grids that are best
16 accomplished in a regulatory proceeding by the public utilities
17 commission to ensure fairness equity and just and reasonable
18 rates.

19 To help accomplish this regulatory proceeding in a timely
20 manner, the legislature provides further policy guidance in
21 conjunction with section 269-145.5 concerning advanced grid
22 modernization technology.

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1 Future investment and planning to modernize Hawaii's
2 electric grids cost-effectively should: (1) enable a diverse
3 portfolio of renewable energy resources; (2) expand options for
4 customers to manage their energy use; (3) allow distributed
5 generation fair and open access to interconnect to the grid at
6 non-discriminatory terms and just and reasonable rates, and the
7 commission should ensure such access and rates through
8 applicable rules, orders, and tariffs; and (4) provide fair
9 payment for grid services provided to customers and fairly
10 compensate customers for valuable services provided to the grid
11 by distributed generation.

12 It is the legislature's intent that the public utilities
13 commission open a proceeding by July 1, 2014 to address the
14 technical, policy, and economic issues associated with
15 modernization of Hawaii's electricity grids.

16 The legislature requests that the commission complete the
17 proceeding and submit a final report on the results of the
18 proceeding to the legislature no later than twenty days prior to
19 the convening of the regular session of 2016. The legislature
20 also requests that the public utilities commission identify and
21 establish an interim timeline for resolving short-term, high-
22 priority issues associated with grid modernization. For issues

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1 that require further in-depth analysis and discussion by the
2 parties, the commission would establish a longer timeline for
3 resolution and reporting under this proceeding.

4 SECTION 2. (a) The public utilities commission shall
5 commence a proceeding by July 1, 2014, to address the technical,
6 policy, and economic issues associated with the modernization of
7 Hawaii's electricity grids. The commission proceeding required
8 under this subsection may encompass one or more procedural
9 timelines, as determined necessary and appropriate by the
10 commission.

11 (b) The commission shall submit a report of its findings
12 and recommendations to the legislature no later than twenty days
13 prior to the convening of the regular session of 2016.

14 (c) The commission and the division of consumer advocacy
15 within the department of commerce and consumer affairs shall be
16 exempt from section 103D-304, Hawaii Revised Statutes, in its
17 procurement of any professional services needed to conduct the
18 proceeding.

19 SECTION 3. There is appropriated out of the general
20 revenues of the State of Hawaii the sum of \$750,000 or so much
21 thereof as may be necessary for fiscal year 2014-2015 for the

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[PUC Proposed Revisions]

1 public utilities commission to conduct the proceeding required
2 pursuant to section 2 of this Act.

3 The sum appropriated shall be expended by the public
4 utilities commission for the purposes of this Act.

5 SECTION 4. There is appropriated out of the general
6 revenues of the State of Hawaii the sum of \$750,000 or so much
7 thereof as may be necessary for fiscal year 2014-2015 for the
8 division of consumer advocacy within the department of commerce
9 and consumer affairs to represent the interests of all consumers
10 in accordance with section 269-51 in the course of the
11 proceeding required pursuant to section 2 of this Act.

12 The sum appropriated shall be expended by the division of
13 consumer advocacy within the department of commerce and consumer
14 affairs for the purposes of this Act.

15 SECTION 5. This Act shall take effect on July 1, 2014.

H.B. NO. 1943, H.D. 1

[PUC Proposed Revisions]

Report Title:

Grid Modernization; Hawaii Electric System; Public Utilities Commission; Appropriation

Description:

Requires the commission to initiate a proceeding no later than July 1, 2014, to discuss technical, policy, and economic issues associated with the modernization of Hawaii's electricity grids.

The summary description of legislation appearing on this page is for informational purposes only and is not legislation or evidence of legislative intent.

H.B. NO. 1943/S.B. No. 2656
[Discussed Revisions]

A BILL FOR AN ACT

RELATING TO THE MODERNIZATION OF THE HAWAII ELECTRIC SYSTEM.

BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF HAWAII:

- 1 SECTION 1. (a) The public utilities commission shall
2 commence a proceeding by July 1, 2014, to address the technical,
3 policy, and economic issues associated with the modernization of
4 Hawaii's electricity grids, and shall take into consideration
5 the following:
- 6 (1) Methods to support the State in enabling a diverse
7 portfolio of renewable energy resources;
- 8 (2) Ways to expand options for customers to manage their
9 energy use;
- 10 (3) The allowance of fair and open access for distributed
11 generation systems to interconnect to the grid at non-
12 discriminatory terms and at just and reasonable rates,
13 and ways in which the commission may ensure such
14 access and rates through applicable rules, orders, and
15 tariffs; and
- 16 (4) The provision of fair payment for grid services
17 provided to customers and the fair compensation to

H.B. NO. 1943/S.B. No. 2656

[Discussed Revisions]

1 customers for valuable services provided to the grid
2 by distributed generation.

3 The commission proceeding required under this subsection
4 may encompass one or more procedural timelines, as determined
5 necessary and appropriate by the commission.

6 (b) The commission shall submit a report of its findings
7 and recommendations to the legislature no later than twenty days
8 prior to the convening of the regular session of 2016.

9 (c) The commission and the division of consumer advocacy
10 within the department of commerce and consumer affairs shall be
11 exempt from section 103D-304, Hawaii Revised Statutes, in its
12 procurement of any professional services needed to conduct the
13 proceeding.

14 SECTION 3. There is appropriated out of the general
15 revenues of the State of Hawaii the sum of \$750,000 or so much
16 thereof as may be necessary for fiscal year 2014-2015 for the
17 public utilities commission to conduct the proceeding required
18 pursuant to section 1 of this Act.

19 The sum appropriated shall be expended by the public
20 utilities commission for the purposes of this Act.

21 SECTION 4. There is appropriated out of the general
22 revenues of the State of Hawaii the sum of \$750,000 or so much

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[Discussed Revisions]

1 thereof as may be necessary for fiscal year 2014-2015 for the
2 division of consumer advocacy within the department of commerce
3 and consumer affairs to represent the interests of all consumers
4 in accordance with section 269-51 in the course of the
5 proceeding required pursuant to section 1 of this Act.

6 The sum appropriated shall be expended by the division of
7 consumer advocacy within the department of commerce and consumer
8 affairs for the purposes of this Act.

9 SECTION 5. This Act shall take effect on July 1, 2050.

H.B. NO. 1943/S.B. No. 2656

[Discussed Revisions]

Report Title:

Grid Modernization; Hawaii Electric System; Public Utilities Commission; Appropriation

Description:

Requires the commission to initiate a proceeding no later than July 1, 2014, to discuss technical, policy, and economic issues associated with the modernization of Hawaii's electricity grids.

The summary description of legislation appearing on this page is for informational purposes only and is not legislation or evidence of legislative intent.