

TESTIMONY OF HERMINA MORITA
CHAIR, PUBLIC UTILITIES COMMISSION
DEPARTMENT OF BUDGET AND FINANCE
STATE OF HAWAII
TO THE
SENATE COMMITTEE ON WAYS & MEANS

FEBRUARY 20, 2014
9:05 a.m.

MEASURE: S.B. No. 2656, S.D. 1

TITLE: Relating to the Modernization of the Hawaii Electric System

Chair Ige and Members of the Committee:

DESCRIPTION:

S.B. No. 2656, S.D. 1 requires the Public Utilities Commission (“Commission”) to “address the technical, policy, and economic issues associated with the modernization of Hawaii’s electricity grid” via a proceeding initiated by the Commission on or before July 1, 2014 (“Proceeding”). This measure requires the Proceeding be used to address a list of specific grid modernization-focused issues, including methods for ensuring distributed generation receive grid access on fair, non-discriminatory terms, and ways to expand customer options that will enable them to better manage their energy usage. The Commission’s Proceeding may move according to one or more procedural timelines, as determined by the Commission, and the Commission must submit a report to the Legislature of its findings and recommendations prior to the Regular Session of 2016. In addition, this measure contains various provisions supporting the Commission and the Consumer Advocate in acquiring the necessary resources to properly conduct the Proceeding.

POSITION:

The Commission supports the Senate Draft 1, and would like to offer the following comments for the Committee’s consideration.

COMMENTS:

The Commission supports the Senate Draft 1 and the Senate Committee on Energy & Environment’s (“ENE Committee”) ongoing efforts to bring various stakeholders

together to generate legislative solutions which are beneficial to all ratepayers and are in the public interest. The Proceeding and the legislative guidance provided in this measure will give interested parties the opportunity in a regulatory forum to address the technical, economic, and policy issues associated with the modernization of the State's electric grids.

Thank you for the opportunity to provide comments on this measure.



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

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Statement of
RICHARD C. LIM
Director

Department of Business, Economic Development, and Tourism
before the

SENATE COMMITTEE ON WAYS AND MEANS

Thursday, February 20, 2014
9:05a.m.

State Capitol, Conference Room 211

in consideration of

SB 2656, SD1

RELATING TO THE MODERNIZATION OF THE HAWAII ELECTRIC SYSTEM.

Chair Ige, Vice Chair Kidani, and Members of the Committee.

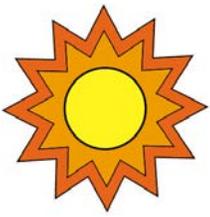
The Department of Business, Economic Development, and Tourism (DBEDT) respectfully offers comments on SB 2656, SD1, which requires the Public Utilities Commission (PUC) to initiate a proceeding to address the technical, policy, and economic issues associated with the modernization of Hawaii's electricity grids; directs the Division of Consumer Advocacy (Consumer Advocate) to represent the interests of all consumers in the course of the proceeding; and appropriates general funds to the PUC and Consumer Advocate for the purposes of effectuating this measure.

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. Because of the dynamic nature of the energy ecosystem and the potential for increased solutions for energy supply, transmission, and distribution, DBEDT cautions against being overly prescriptive in legislation, in order to 1) provide adequate flexibility and opportunity for an expeditious and effective regulatory proceeding to enable a solutions-driven approach by interested stakeholders to address the technical, policy, and economic issues associated with grid modernization and 2) ensure that potential solutions, such as tariffs and rules, that may advance grid modernization and further enable Hawaii to achieve its clean energy mandates are not inhibited or obfuscated by any such legislation or regulatory proceeding.

DBEDT respectfully defers to the PUC and Consumer Advocate on the regulatory aspects contained in this bill.

Thank you for the opportunity to provide comments on SB 2656, SD1.



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Testimony of Inter-Island Solar Supply
In Support of SB 2656, SD 1
Before the Senate Committee on Ways & Means
Thursday, February 20, 2014

Chair Ige, Vice-Chair Kidani and members of the Committee, my name is Richard Reed and I am the president of Inter-Island Solar Supply. SB 2656, SD 1 is timely and raises exceedingly important questions. We are in strong support, with comments and recommendations discussed below.

The most important issues for Distributed Generation (DG), or what is often called Rooftop Solar, in Hawaii and elsewhere are: 1) Timely grid accessibility, 2) The fair and equitable allocation of costs associated with the technical upgrades that may be required to accommodate more DG, and 3) The fairness and equity of the NEM proposition for all ratepayers.

It is our position that the final draft of SB 2656, SD 1 should require the PUC to tackle all of these issues simultaneously, with highest priority on the technical and engineering upgrades that allow increased grid access while maintaining system safety and reliability.

There continues to be a perception that DG is only for rich folks and that non-participating ratepayers will be left holding a very heavy bag containing significantly higher rates. This is a misconception for four primary reasons:

First, high electric rates in Hawaii are not caused by renewables; they are primarily a function of our continuing dependence on expensive low-sulfur crude oil.

Second, in the new world of creative solar financing, long-term low interest loans, leases and power purchase agreements provide all credit worthy ratepayers with a means to lower or at least stabilize their electric bills. Our banks and credit unions, moreover, have developed competitively priced PV financing options for those that wish to own their systems.

Third, the State's innovative GEMS green finance program is designed to help precisely those ratepayers that want PV, but do not qualify for conventional finance.

Forth, community solar as proposed in SB 2934, SD 1 would allow ratepayers living in condos or homes that cannot easily or effectively deploy solar to buy shares in large-scale PV or wind projects and thus lower their utility costs. It is unfair to find inequality in the system and wring our hands if simple solutions such as community solar are at hand.

The catch here is that all of these democratizing finance options are of no help without grid access. Therefore, the Commission should first focus on the best and most cost-

effective technical and engineering solutions that will provide increased and continuing DG grid access.

Safe and reliable interconnection for all comers is not, however, a cost free proposition. This docket has the potential to impact customer electric bills as well as utility financial returns. The thorny issue of how costs should be most fairly allocated for the system-wide upgrades needed to accommodate more DG is best left to the Commission.

There are other questions to consider. For example, what DG benefits inure to all ratepayers and how should we value them? This is not simply about costs with no offsetting ratepayer benefits. It is our sense that appropriate, targeted and timely utility capital expenditures – especially for Oahu’s aged grid – that allow more DG while minimizing the impact on all ratepayers, is a significant public benefit. Importing and burning less oil makes us more secure, mitigates environmental damage, promotes our state’s green image, keeps billions of dollars in the state for reinvestment, creates good jobs and expands the tax base. All of these, I would argue, are valuable public benefits that are diminished by less, rather than more, DG and energy efficiency.

There are some that argue that they receive no direct personal benefit from DG because they live in a high-rise and DG only benefits those that live in single family or low-rise multi-family housing. With the adoption of community based solar (SB 2934) this argument, while specious, becomes irrelevant.

The PUC has previously ruled in the Energy Efficiency Docket (05-0069) and other proceedings that all ratepayers benefit from our statutory (EEPS) energy efficiency programs. Homeowners do not directly benefit from chiller or large motor and commercial lighting upgrades. Condo dwellers do not directly benefit from solar water heating installations. Neither group directly benefits from equipment upgrades in hotels or airports. In reality, all of us **collectively benefit** from investments in energy efficiency made by individuals, condo boards, businesses, hotels or the state government.

All ratepayers now pay a small monthly Public Benefit Fund surcharge that supports our EEPS goal of achieving 30% of all our energy needs from efficiency gains by 2030. The Commission long ago judged that this small incremental charge is cost-effective across the full suite of approved residential, commercial and industrial efficiency measures and is also clearly in the public interest.

Are the public benefits from NEM and DG really that much different from those received from EEPS and energy efficiency? We think not, but the proper venue for this discussion is in the docket proposed by this legislation.

Our primary concern with SB 2656, SD 1 is the protracted time frame allocated for PUC decision making. Without a prompt D & O focused on the technical upgrades that will allow more DG, additional damage will be done to ratepayers and the solar industry. We believe that nine months should provide adequate time to complete this essential piece of the docket. Thank you for the opportunity to provide these comments.



Hawaii Solar Energy Association
Serving Hawaii Since 1977

Before the Senate Committee on Ways and Means
Thursday, February 20, 2014, 9:05 a.m., room 211
SB 2656 SD 1: Relating to the Modernization of the Hawaii Electrical System

Aloha Chair Ige, Vice-Chair Kidani, and members of the Senate Committee on Ways and Means,

On behalf of the Hawaii Solar Energy Association (HSEA), I would like to testify in support of the general intent of SB 2656 SD 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. However, HSEA favors HB 1943 HD 2, which provides more concrete language and direction on the PUC proceeding. With the imminent appointment of a new PUC commissioner and chair, it is key that any legislation which directs a docket to the PUC be given enough specificity to ensure its success. HSEA would therefore like to respectfully suggest several amendments to SB 265 SD 1, as noted on the last page of this testimony.

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 81 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 eight 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 cites 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.

Moreover, 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.

SB 2656 SD 1 would begin to address these issues, but HSEA respectfully requests the following amendments as HSEA believes it is necessary to further define the scope of the proceeding to ensure success. Under section (1)(b) HSEA recommends the addition of the following:

The scope of the commission proceeding shall include:

- (1) Identifying and implementing technical solutions to enable customer access to distributed generation and avoid interconnection delays;
- (2) Developing a framework for modernizing the grid to maximize customer options to manage their energy use, and to allocate the costs of grid upgrades based on a comprehensive view of costs and benefits to customers, the electric utility grid, and the public interest; and
- (3) Developing a framework for modernizing utility rates related to customer options such as distributed generation based on a comprehensive view of costs and benefits to customers, the electric utility grid and the public interest using best practice

for modeling would address all of these issues by directing the PUC to address the technical, policy, and economic challenges associated with grid modernization to benefit all customers.

The addition of this language would ensure that the scope of the docket includes specific technical solutions and strategies, a much needed framework on allocation of costs for grid upgrades, and a comprehensive analysis of costs and benefits of distributed generation. In addition, HSEA is also concerned that customers will get lost in delays as the study moves forward and respectfully requests that some accounting be done to track customer interconnection. Specifically, HSEA respectfully requests the addition of the following:

While the commission proceeding required under this section is pending, the public utilities commission shall require a public utility to file with the commission a detailed report on each customer request to interconnect distributed generation that the utility has denied or has delayed for at least thirty days beyond any applicable deadline in the utility's interconnection procedures.

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



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Testimony of ERIK KVAM
President of Renewable Energy Action Coalition of Hawaii
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**In SUPPORT of SB 2656 SD 1 RELATING TO
MODERNIZATION OF THE HAWAII ELECTRIC SYSTEM**

**Before the
SENATE COMMITTEE ON WAYS AND MEANS**

February 20, 2014 9:05 a.m.

Aloha Chair Ige, Vice-Chair Kidani and members of the Committee.

My name is Erik Kvam. I am the President of Renewable Energy Action Coalition of Hawaii (REACH), a trade association whose vision is a Hawaiian energy economy based 100% on renewable sources indigenous to Hawaii.

REACH is in **SUPPORT** of SB 2656 SD 1.

Hawaii's solar power industry is in crisis. Customers are not ordering and solar power installers are laying off workers because the HECO utilities have braked installation of new solar power systems until the utilities decide whether and how to upgrade the utilities' substations to accommodate lots more systems.

How did this happen? This crisis is happening because the utilities seem to have no planning process for systematically evaluating options for achieving 100% renewable energy. The utilities seem to have no process for figuring out what options -- like options to upgrade substations to accommodate lots more solar power systems -- in what amounts in what order will get us to 100% renewable energy at the greatest savings to customers and themselves.

REACH **SUPPORTS** SB 2656 SD 1 because the PUC proceeding required by SB 2656 SD 1 would provide an appropriate forum for conversations with Hawaii's electric utilities about their planning goals and their evaluations of grid modernization options, including options for grid upgrades to accommodate anticipated growth in customer generation.

Thank you for providing this opportunity to testify.



SENATE COMMITTEE ON WAYS AND MEANS

Thursday, February 20, 2014

**TESTIMONY IN SUPPORT OF THE INTENT OF SB 2656_SD1 RELATING TO
THE MODERNIZATION OF THE HAWAII ELECTRIC SYSTEM**

Sarah Bertram, Director, Public Policy, Sunrun

Chair Ige, Vice Chair Kidani, and Members of the Committee:

Thank you for the opportunity to provide testimony in support of the intent of SB 2656_SD1.

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.

Sunrun supports the intent of SB 2656_SD1 to address the public policy problem presented by a utility grid that can no longer serve the needs of modern-day consumers.

The total amount of rooftop solar in Hawaii has roughly doubled each year for the last five years. 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. While legislators should be proud of the public's leadership in investing to build a clean energy future, there are several reasons for serious concern. Hawaii has a long way to go to achieve its 40% renewable energy standard by 2030. And over the last several months, thousands of Hawaii residents have experienced significant delay on connecting their rooftop solar projects to the utility grid.

An aged utility grid that is managed by a company that lacks a plan for the future is now threatening consumers' ability to invest in clean solar power generated on their own rooftops. New public policy is needed to address this threat, because consumers' increasing desire to serve on-site electricity load with rooftop solar is both in the public interest and strongly supported by the public.

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.*"

In its initial form, SB 2656 was consistent with this objective. As currently written, Sunrun has serious reservations that SB 2656_SD1 could sufficiently address the technical grid barriers that are already limiting increased adoption of rooftop solar in Hawaii.

SB 2656_SD1 calls on the Commission to commence a proceeding to address the "technical, policy, and economic issues associated with the modernization of Hawaii's electricity grid." Sunrun notes that the Commission is already empowered to conduct such a proceeding. While Sunrun supports the broader policy scope presented in SB 2656_SD1, Sunrun submits that a stronger direction to tackle the technical issues that are limiting solar adoption today should be added to the legislation.

The current House version of this bill – HB 1943_HD2 provides clearer direction in a number of ways. For example, HB 1943_HD2 requires that Commission establish procedural timelines to "expedite the implementation of short-term solutions and minimize delays on customer access to distributed generation." This is important because thousands of

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customers have already been negatively impacted by the utility's recent rooftop solar policy changes. Recent permit data shows the impact these new policies are having on reducing the amount of rooftop solar being installed in Hawaii. Enabling multiple timelines for the grid modernization proceeding will minimize the likelihood and impact of future disruptions. HB 1943_HD2 also specifies a utility reporting process for any distributed generation interconnection applications that are significantly delayed while the grid modernization plan is in development. This reporting will provide transparency into any technical issues that develop in the interim that impede open rooftops in Hawaii from adopting solar.

Sunrun supports the intent of SB 2656_SD2 and hopes that it can be improved through additional collaboration with key stakeholders as part of the legislative process.

Thank you for the opportunity to provide this testimony.

Sincerely,
Sarah Bertram



SENATE COMMITTEE ON WAYS AND MEANS

February 20, 2014, 9:05 A.M.

Room 211

(Testimony is 2 pages long)



COMMENTS

Chair Ige and members of the Committees on Ways and Means:

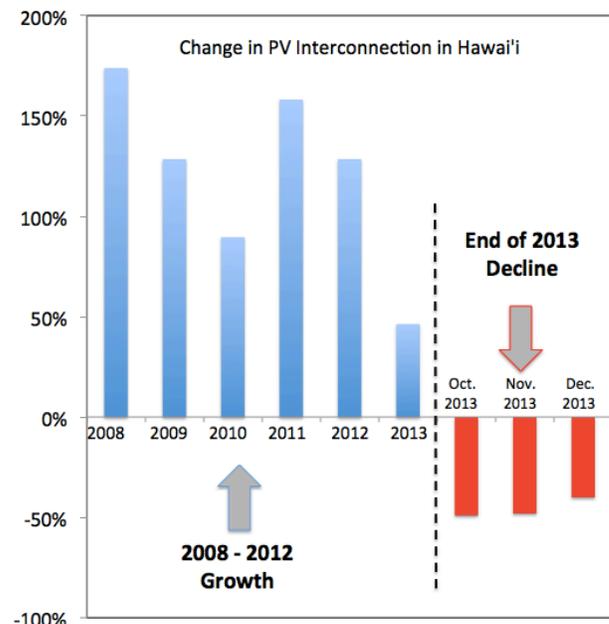
Blue Planet Foundation supports the intent of SB 2656, which directs the Public Utilities Commission to address the technical, policy, and economic issues associated with the modernization of Hawaii's electricity grid, including issues related to distributed generation by Hawaii's ratepayers.

Blue Planet Foundation strongly supports a robust electrical grid that can connect clean and affordable energy to Hawaii's citizens and ratepayers, and we believe that issues surrounding distributed generation need to be addressed urgently. In light of that urgency, we believe that stronger policy direction is required, to ensure fair and open access to the grid for Hawaii's ratepayers. For example, the language in HB 1943 provides the PUC with more specific policy direction in addressing these issues.

1. Modern Grid Interconnection is Urgently Needed.

Solutions for a modern and open grid 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%.



% 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.

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 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. With stronger policy guidance, Senate Bill 2656 can help to make sure that this grid modernization issue is resolved sooner, rather than later.

2. Help Ensure Equality for All Ratepayers.

Strong policy guidance 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.

3. Stronger Policy Guidance Can Help to Avoid a Costly and Inefficient Fight for Ratepayers.

Recently in Arizona, a highly public fight between the 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. Strong policy guidance, mandating fair and open access to the electric grid for Hawaii ratepayers, can ensure that issues surrounding grid modernization and distributed generation are addressed in an efficient and timely manner.

Thank you for the opportunity to testify.



SENATE COMMITTEE ON WAYS AND MEANS
February 20, 2014 — 9:05 a.m. — Room 211

Testimony Supporting the Intent of SB 2656 SD1

Chair Ige, Vice Chair Ruderman, Vice Chair Taniguchi, and Members of the Committees:

Thank you for the opportunity to provide testimony supporting the intent of SB 2656. ***RevoluSun supports the intent of SB 2656, but requests that SB 2656 SD1 be amended to conform with the attached draft bill, which more closely tracks the original intent of the bill.***

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.

SB 2656 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.

However, the proposed SD1 significantly weakens the bill by deferring legislative action in favor of having the Public Utilities Commission open a docket on this matter. RevoluSun believes that more direct legislative action is required to ensure that this important issue is addressed more quickly and more vigorously than it can be addressed through a PUC docket. For this reason, RevoluSun requests that SB 2656 SD1 be amended to conform with the attached draft bill, which more closely tracks the original intent of the bill.

Sincerely,

Colin Yost
Principal & General Counsel

RELATING TO THE MODERNIZATION OF THE HAWAII ELECTRIC SYSTEM.

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

SECTION 1. Section 269-145.5, Hawaii Revised Statutes, is amended to read as follows:

"**[+]§269-145.5[+] Advanced grid modernization technology; principles.** (a) The commission, in carrying out its responsibilities under this chapter, shall consider the value of improving electrical generation, transmission, and distribution systems and infrastructure within the State through the use of advanced grid modernization technology in order to improve the overall reliability and operational efficiency of the Hawaii electric system.

(b) The commission shall address technical, policy, and economic issues associated with modernization of the electric grid, based on the following principles:

- (1) Enable a diverse portfolio of renewable energy resources that adheres to customers' preferences;
- (2) Expand options for customers to manage their energy use;
- (3) Allow distributed generation fair and open access to interconnect to the grid at non-discriminatory terms and at just and reasonable rates, and the commission should ensure such access and rates

through applicable rules, orders, and tariffs;
and

(4) Provide fair payment for grid services provided to customers and fairly compensate customers for valuable services provided to the grid by distributed generation; and

(5) Incorporate customers' current and forecasted preferences into the utility distribution system and integrated resource planning."

SECTION 2. (a) By July 1, 2014, the public utilities commission shall commence a proceeding to address the technical, policy, and economic issues associated with the modernization of the electric grid in the State, based on the principles in section 269-145.5(b), Hawaii Revised Statutes.

The scope of the commission proceeding shall include:

- (1) Identifying and implementing technical solutions to enable customer access to distributed generation and avoid interconnection delays;
- (2) Developing a framework for modernizing the grid to maximize customer options to manage their energy use, and to allocate the costs of grid upgrades based on a comprehensive view of costs and benefits to customers, the electric utility grid, and the public interest; and
- (3) Developing a framework for modernizing utility rates related to customer options such as

distributed generation based on a comprehensive view of costs and benefits to customers, the electric utility grid, and the public interest using best practices for modeling.

(b) The commission proceeding under this section shall encompass one or more procedural timelines, as determined by the public utilities commission, to expedite the implementation of short-term solutions and minimize delays to customer access to distributed generation.

(c) While the commission proceeding required under this section is pending, the public utilities commission shall require a public utility to file with the commission a detailed report on each customer request to interconnect distributed generation that the utility has denied or has delayed for at least thirty days beyond any applicable deadline in the utility's interconnection procedures. The report shall include:

- (1) The precise technical reasons that the interconnection request has not been approved;
- (2) The specific technical solutions the utility is pursuing, including customer-sited and grid-sited technologies; and
- (3) The specific timeframe for implementing each potential solution.

The utility shall also file quarterly and annual reports with the public utilities commission. The reports shall be open to the public and shall summarize the

aggregate information in the detailed reports specified in this section.

The public utilities commission shall submit a final report of its findings and recommendations to the legislature no later than twenty days prior to the convening of the regular session of 2016, and shall submit quarterly interim progress reports to the legislature on the implementation of short-term solutions.

(d) The public utilities commission and the division of consumer advocacy of the department of commerce and consumer affairs shall be exempt from section 103D-304, Hawaii Revised Statutes, in its procurement of any professional services needed to conduct the commission proceeding.

SECTION 3. There is appropriated out of the general revenues of the State of Hawaii the sum of \$ or so much thereof as may be necessary for fiscal year 2014-2015 for the public utilities commission to conduct the proceeding required pursuant to section 2 of this Act; provided that the public utilities commission shall provide intervenor parties access to professional services procured by the commission as necessary and appropriate to enable full and fair stakeholder participation in the proceeding.

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

SECTION 4. There is appropriated out of the general revenues of the State of Hawaii the sum of \$ or so

much thereof as may be necessary for fiscal year 2014-2015 for the division of consumer advocacy of the department of commerce and consumer affairs to represent the interests of consumers in accordance with section 269-51, Hawaii Revised Statutes, in the course of the proceeding required pursuant to section 2 of this Act.

The sum appropriated shall be expended by the department of commerce and consumer affairs for the purposes of this Act.

SECTION 5. Statutory material to be repealed is bracketed and stricken. New statutory material is underscored.

SECTION 6. This Act shall take effect upon approval.



2/20/2014

Senate Committee on Ways and Means

WAM

9:05 a.m.

TESTIMONY SUPPORTING THE INTENT

SB 2656

Chair Ige, Vice Chair Kidani, and Members of the Committees

Hawaii PV Coalition is pleased to submit testimony supporting the intent of SB 2656 SD1. However, Hawaii PV Coalition requests that SB 2656 SD1 be amended to conform with the attached draft bill, which more closely tracks the original intent of the bill.

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.

The intent of SB 2656 is to 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.

However, the proposed SD1 significantly weakens the bill by deferring legislative action in favor of having the Public Utilities Commission open a docket on this matter. The Hawaii PV Coalition believes that more direct legislative action is required to ensure that this important issue is addressed more quickly and more vigorously than it can be addressed through a PUC docket. For this reason, the Hawaii PV Coalition requests that SB 2656 SD1 be amended to conform with the attached draft bill, which more closely tracks the original intent of the bill.

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.

RELATING TO THE MODERNIZATION OF THE HAWAII ELECTRIC SYSTEM.

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

SECTION 1. Section 269-145.5, Hawaii Revised Statutes, is amended to read as follows:

"**[+]§269-145.5[+] Advanced grid modernization technology; principles.** (a) The commission, in carrying out its responsibilities under this chapter, shall consider the value of improving electrical generation, transmission, and distribution systems and infrastructure within the State through the use of advanced grid modernization technology in order to improve the overall reliability and operational efficiency of the Hawaii electric system.

(b) The commission shall address technical, policy, and economic issues associated with modernization of the electric grid, based on the following principles:

- (1) Enable a diverse portfolio of renewable energy resources that adheres to customers' preferences;
- (2) Expand options for customers to manage their energy use;
- (3) Allow distributed generation fair and open access to interconnect to the grid at non-discriminatory terms and at just and reasonable rates, and the commission should ensure such access and rates

through applicable rules, orders, and tariffs;
and

(4) Provide fair payment for grid services provided to customers and fairly compensate customers for valuable services provided to the grid by distributed generation; and

(5) Incorporate customers' current and forecasted preferences into the utility distribution system and integrated resource planning."

SECTION 2. (a) By July 1, 2014, the public utilities commission shall commence a proceeding to address the technical, policy, and economic issues associated with the modernization of the electric grid in the State, based on the principles in section 269-145.5(b), Hawaii Revised Statutes.

The scope of the commission proceeding shall include:

- (1) Identifying and implementing technical solutions to enable customer access to distributed generation and avoid interconnection delays;
- (2) Developing a framework for modernizing the grid to maximize customer options to manage their energy use, and to allocate the costs of grid upgrades based on a comprehensive view of costs and benefits to customers, the electric utility grid, and the public interest; and
- (3) Developing a framework for modernizing utility rates related to customer options such as

distributed generation based on a comprehensive view of costs and benefits to customers, the electric utility grid, and the public interest using best practices for modeling.

(b) The commission proceeding under this section shall encompass one or more procedural timelines, as determined by the public utilities commission, to expedite the implementation of short-term solutions and minimize delays to customer access to distributed generation.

(c) While the commission proceeding required under this section is pending, the public utilities commission shall require a public utility to file with the commission a detailed report on each customer request to interconnect distributed generation that the utility has denied or has delayed for at least thirty days beyond any applicable deadline in the utility's interconnection procedures. The report shall include:

- (1) The precise technical reasons that the interconnection request has not been approved;
- (2) The specific technical solutions the utility is pursuing, including customer-sited and grid-sited technologies; and
- (3) The specific timeframe for implementing each potential solution.

The utility shall also file quarterly and annual reports with the public utilities commission. The reports shall be open to the public and shall summarize the

aggregate information in the detailed reports specified in this section.

The public utilities commission shall submit a final report of its findings and recommendations to the legislature no later than twenty days prior to the convening of the regular session of 2016, and shall submit quarterly interim progress reports to the legislature on the implementation of short-term solutions.

(d) The public utilities commission and the division of consumer advocacy of the department of commerce and consumer affairs shall be exempt from section 103D-304, Hawaii Revised Statutes, in its procurement of any professional services needed to conduct the commission proceeding.

SECTION 3. There is appropriated out of the general revenues of the State of Hawaii the sum of \$ or so much thereof as may be necessary for fiscal year 2014-2015 for the public utilities commission to conduct the proceeding required pursuant to section 2 of this Act; provided that the public utilities commission shall provide intervenor parties access to professional services procured by the commission as necessary and appropriate to enable full and fair stakeholder participation in the proceeding.

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

SECTION 4. There is appropriated out of the general revenues of the State of Hawaii the sum of \$ or so

much thereof as may be necessary for fiscal year 2014-2015 for the division of consumer advocacy of the department of commerce and consumer affairs to represent the interests of consumers in accordance with section 269-51, Hawaii Revised Statutes, in the course of the proceeding required pursuant to section 2 of this Act.

The sum appropriated shall be expended by the department of commerce and consumer affairs for the purposes of this Act.

SECTION 5. Statutory material to be repealed is bracketed and stricken. New statutory material is underscored.

SECTION 6. This Act shall take effect upon approval.



Feb 19, 2014

Hawaii Farmers Union United –
Kona Chapter
P.O. Box 5436
Kailua-Kona HI 96745-5436



Steve Sakala
President

Aloha Chairman Ige and Committee Members,

Greg Smith
Vice-President

I am writing you today in support of SB2656 in regard to the modernization of the grid here in Hawaii.

John Giblin Jr.
Vice President

This issue is of vital importance to farmers across the state. Here on the Big Island we pay one of the most expensive electric rates in the country. We are already working hard just to break even and if we get an unexpectedly high electric bill it could mean the difference of profit or no profit for the month or more.

Kurt
Schweickhard
Treasurer

We live in a place with one of the highest amounts of sun hours in our country and thus have the wonderful opportunity to create solar power. It is in our states best interest to support solar innovation and the modernization of our grid. We would also see the benefit of having lower costs to consumers thus leaving them money to spend in our local economy rather than going to a corporation where the profit leaves our state.

Hazel Beck
Secretary

Kelly Greenwell
Member

We would like to see language added to this bill that would give stronger direction to the PUC to incorporate rooftop solar. Recent polls have shown that 96% of Hawaii residents support rooftop solar. This would move us toward a more resilient local economy as well as sustainability. Solar has been a major, sustainable economic engine for Hawaii. As of 2012, it accounted for 28% of all construction expenditures in the state.

Doug Pittman
Member

Thank you for hearing this bill and we urge you to support SB2656.

Franz Weber
Member

Respectfully Submitted,
HAWAII FARMERS UNION UNITED-
KONA CHAPTER

STEVE SAKALA

Kona Chapter, President

From: mailinglist@capitol.hawaii.gov
To: [WAM Testimony](#)
Cc: mendezj@hawaii.edu
Subject: *Submitted testimony for SB2656 on Feb 20, 2014 09:05AM*
Date: Tuesday, February 18, 2014 10:41:22 AM

SB2656

Submitted on: 2/18/2014

Testimony for WAM on Feb 20, 2014 09:05AM in Conference Room 211

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

Comments:

Please note that testimony submitted less than 24 hours prior to the hearing, improperly identified, or directed to the incorrect office, may not be posted online or distributed to the committee prior to the convening of the public hearing.

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From: [Cinnie Frith](#)
To: [WAM Testimony](#)
Subject: Support SB2656
Date: Wednesday, February 19, 2014 4:06:21 PM

HECO needs to be put into the position of advocate for not only long overdue grid updates, but also reasonable cost controls for rate payers.

This is not a question of nice to have, but rather a need to have these areas addressed asap so as not to fall even farther behind in the quest for electric energy that is reliable, sustainable and cost effective.

Mahalo,
Cinnie Frith-Kailua, Oahu

From: mailinglist@capitol.hawaii.gov
To: [WAM Testimony](#)
Cc: mauisolarfuture@gmail.com
Subject: *Submitted testimony for SB2656 on Feb 20, 2014 09:05AM*
Date: Tuesday, February 18, 2014 1:19:10 PM

SB2656

Submitted on: 2/18/2014

Testimony for WAM on Feb 20, 2014 09:05AM in Conference Room 211

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

Comments:

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